Infobook:

The Infowatch Series

Community Health Newsletter

1989 - 1997

A service of the Health Priorities Analysis Unit to inform people about research on health.

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

Healthy Communications: Producing A Health Report (*Infowatch*) for Monitoring and Promoting Health in Local Communities

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ABSTRACT

In order to bridge the gap between producers and users of community health data, we have developed a standardized format to provide a simple, comprehensive approach to the communication of epidemiologic data at the local level. *Infowatch* follows a series of format and style rules selected to enhance readability. The four-page format is divided into six sections: introduction and scope; "results" presented as charts, figures and text; policy implications (through consultation with community groups); methodological summary; references for self-study; and, invitation for reader feedback. An editorial committee comprising experts and representatives from local interest groups ensures that the data presented are relevant and of high quality. The content of each *Infowatch* issue varies depending on community priorities. *Infowatch* is distributed to 3,000 people, including representatives from health-related, academic, governmental and non-governmental agencies. Five areas assess qualitatively the impact of *Infowatch:* reader, media, policy, education, and solicited responses. Overall, response from all categories has been favourable with evidence of infiltration into policy.

ABRÉGÉ

Afin de faire le lien entre fournisseurs et consommateurs de données épidémiologiques régionales, nous avons développé un format standardisé qui les communique d'une façon simple et complète. Le format particulier d'*Infowatch* facilite sa lecture et comprend six sections: introduction et envergure; résultats (présentés sous forme de graphiques, diagrammes, tableaux ou textes); les effets politiques (en consultation avec des groupes communautaires); sommaire des méthodes; références pour étude autonome; observations des lecteurs. Un comité éditorial composé d'experts et de représentants de groupes communautaires assure que les données sont utiles et d'excellente qualité. Le contenu de chaque publication varie selon les priorités de la communauté. *Infowatch* est distribué à 3,000 personnes, y compris des représentants d'organismes de la santé, scolaires, gouvernementaux et non-gouvernementaux. Les personnes et organismes suivants évaluent l'impact d'*Infowatch*: les lecteurs, les médias, les responsables des politiques, et l'éducation. En général, la réaction des catégories mentionnées est favorable. En outre, il est évident qu'*Infowatch* a influencé les politiques.

Readily available information to assess, monitor and evaluate the health of populations is called for by citizens, service providers, educators, students and researchers.[1-4] Increased emphasis on health promotion has led to the need for clear and digestible health information. Devolution of responsibility for planning and priority-setting to the local level has greatly increased the number of decision-makers who must use results of health research. The need for citizens and professionals to have access to health information for improved decision-making at the local community level has been emphasized in recent reports at the provincial, national and international level.[1,5-10] In Ontario, this need has been the impetus for the $4.5 million 1990 Ontario Health Survey, which aims to gather health-related information on residents of local communities throughout the province.[11] Although results of this survey will be widely available, questions remain as to whether and how these data will be used.

The distinction between the "users" and "producers" of community health information is important. Users must be able to access and use community health information in order to assess the need for, and impact of, health programs in their community. However, the necessary methodological and analytical skills for valid interpretation of community health information are often lacking.

On the other hand, producers, or those who collect and analyze community health information, are often ill-informed of the specific needs of users. As a result, the vast amount of health information produced annually is often irrelevant, inaccessible and/or incomprehensible to users. For example, the Hospital Medical Records Institute (HMRI), Statistics Canada, and the Ontario Ministry of Health have each produced reports comprising myriad tabulations without aids for interpretation. Although the potential uses for these data are numerous, the effectiveness of these data remains questionable.

A second forum for community health information lies in scientific journals. Relevant articles, however, are often published in field-specific journals which fail to reach potential users. The question of readability occurs for those users who do come across the published results in scientific journals.

In response to the need for readable community health information, the Faculty of Health Sciences of McMaster University has produced several community health information publications entitled *Infowatch.* These short reports on specific community health topics are targeted at the local community of Hamilton-Wentworth with a view to monitor and promote the health of residents in the community. As such, the reports may serve as a model for other communities. We describe the objectives, style and content of *Infowatch,* as well as its distribution and reported impact.

Objectives

While the overall purpose of *Infowatch* is to "inform people about research in community health", the publication has the following specific intents:

- monitor the health of the citizens of the local community and identify significant trends
- identify and priorize opportunities for action
- analyze specific health problems, and suggest possible causes and/or solutions

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- compare the health of the community with that of similar populations, and interpret differences
- demonstrate the effectiveness of health or health care improvements
- inform the reader about a wider concept of health
- challenge conventional beliefs about health
- advise and recommend actions which can be or are being taken

This last objective involves consultation with informed community interest groups to foster community ownership in the publication. Involvement also enhances awareness of the community health status information that is available, and how it can be used and interpreted.

Along with these comprehensive publication objectives, each issue of *Infowatch* has a specific objective which is determined by the topic. For example, an issue on health and poverty had as its objectives to examine the relationship between low income and health among residents of Hamilton-Wentworth, and to identify community action addressing the observed inequities.

Steps to Producing an *Infowatch*-like Report

Step 1. Editorial Organization

The publication of each *Infowatch* is organized by an editorial committee whose membership changes depending on the primary target audience and the community health topic. For example, an issue on alcohol consumption included representation from the local health department, the Addiction Research Foundation, and McMaster University researchers. Typically, the committee consists of two epidemiologists, a community health professional, and one or more representatives from local interest groups. To date, the interest groups have primarily contributed by describing their data needs, reviewing the drafted publication, and assisting with the "policy implications" section.

The editorial committee uses its expertise in the topic area and is responsible for ensuring that the issue meets the specific needs of the targeted audience, and is clear in its presentation. The type of data, mode of presentation, and potential uses for the data are outlined by this committee.

Step 2. Format and Style of Presentation

Each *Infowatch* issue adheres to a series of format and style rules which were chosen to improve readability. Each publication has six sections:

1. introduction outlining the topic
2. "results" which presents the community health data in charts, figures and text
3. "implications" developed in consultation with community groups
4. methods summary
5. reference citations to encourage further self-study
6. invitation for reader feedback, and who to contact for more information

The design and format of the *Infowatch* aim to keep the publication short but comprehensive. The number of pages is restricted to four, generally with one figure or chart per page. Given this page limit, the text must be clearly and concisely written. The text is analyzed for jargon, readability, and literacy level using commercially available software.[12] Large print and sufficient white space are used to enhance readability.

The use of both textual and graphical presentations was based on the results of a survey of users of similar data.[13] Users typically fell into two categories: those preferring text for describing data; and, those more numerically oriented who preferred charts or tables. These findings have been incorporated into each *Infowatch* by presenting both.

Step 3. Content

These publications contain the most recent available information and, where available, use multiple sources to ensure completeness.

An eye-catching title is used to attract the readers' attention. Examples of titles include "The Baby Boom to Seniors Boom", "Children Can't Fly - Child Pedestrian Injuries", and "Hamilton-Wentworth On The Rocks" (on alcohol abuse). Following the title, the introductory section informs the reader about the content of the issue. This section initiates the discourse with the reader, and is explicit about the focus and scope of the *Infowatch*.

The results section comprises the body of the *Infowatch*. Secondary data analyses provide the main source of information. Data are extracted from previously published sources and are reviewed or re-analyzed to examine the topic under study. This includes the use of computerized databases which have been collected for other purposes (for example, Ministry of Transportation Collision Reports).

Percentages as well as population estimates are presented, the latter being crucial for program planning at the local level. For this reason, standardization or adjustment of rates for age and sex differences is rarely reported. Where possible, data are presented for age and sex groups so that comparisons to other communities can be made. The description of the analytical results is confined to a few sentences for each variable. Results of other studies including citations are given.

The implications section of *Infowatch* covers what can and is being done by the community to address the topic. Delineation of the implication for community action arising from the data is developed in consultation with community interest groups to ensure that the data provided are useful to the users. Interest group involvement also taps into the existing networks of agencies. This discourse is reflected in the *Infowatch* as practical implications for action by citizens, government, non-governmental agencies and university researchers.

The methods section, references, and invitation for reader response comprise the last page. The order of presentation was designed to present the results first. While not standard for scientific journals, this order is more digestible for the reader who may otherwise get bogged down in the technical aspects of data collection and analytical methods.

Each *Infowatch* tries to present opposing views without being judgemental. Most of the data presented are cross-sectional, and issues related to the association between two or more variables (causation) is usually beyond the scope of *Infowatch*.

Step 4. Distribution and Cost

The aim is to produce six *Infowatches* annually on basic community health issues. Currently, the mailing list is approximately 3,000 people and includes public health managers, students at McMaster University (medical, nursing, occupational therapy, physiotherapy and health science graduates), faculty within the Faculty of Health Sciences at McMaster University, other educators, school trustees, clinicians, libraries, local government, hospitals, hospital board members, health committees/councils, community agencies, the media, and various members of the provincial Ministry of Health.

Infowatch is produced completely in-house. Desk-top publishing and various graphics pack-

TABLE I
Strategy and Tactics for the Qualitative Evaluation of Infowatch

Strategy	Tactics for Evaluation	Result
1. Reader Response	• invitation to respond	• two predominantly negative comments out of hundreds of positive responses
	• requests for addition or removal from mailing list	• distribution increased from 2,000 to 3,000 readers
	• requests for additional copies	• examples: Ontario Ministry of Health, Addiction Research Foundation, local Health Unit, local government
2. Media Response	• monitor media coverage	• about half of the issues have formed the basis for a newspaper article
3. Policy Response	• monitor changes in policy (including issue awareness)	• examples: used in a child-pedestrian injury prevention project as basis for a community coalition of individuals, government and non-government organizations; baseline information in a comprehensive health organization (CHO) feasibility study; used by alderman to increase awareness of health of seniors
4. Education Response	• requests for further information	• requests increase after release of an issue
	• use in libraries	• available in all local university, hospital and public libraries
	• use by health science students and integration into curriculum	• resource material for all health science students; part of learning resource packages for medical students; used in a graduate course on community health measurement
5. Solicited Responses	• distribution to provincial District Health Councils and Public Health Departments	• all responses favourable; interest in producing a similar document but unsure as to how to produce and resource commitment; stressed the need for local data which is easily digestible
	• presentation at conferences	• interest in production (methodology and cost) and impact

ages are executed using Macintosh computer hardware and software. By producing the publication in-house, the major costs include photocopy and folding ($200), mailing ($600) and the initial software purchase ($400). Distribution charges have been minimized by capitalizing on existing internal mailing systems. The cost in person-hours for the production of *Infowatch* has not been calculated. Professional printers have estimated a charge of $50-$300 to layout a similar format, plus up to $800 for photocopying, and folding. Thus, the ability to produce *Infowatch* in-house is thought to both reduce costs and allow flexibility, the latter enhancing the editorial committee's control, possibly leading to greater ownership and commitment.

Step 5. Evaluation of Impact

Evaluation of the impact of *Infowatch* is difficult owing to the passive nature (distribution is free) of such a report. Five areas of potential impact, labeled response categories, have been identified to assess qualitatively the impact of *Infowatch:* reader, media, policy, education, and solicited responses (Table I). For *reader* response, each issue invites the reader to return written or verbal comments regarding the issue. All comments are brought to the editorial committee and suggestions incorporated into future issues. With rare exception, comments have been favourable. Second, the response of the *media* is monitored. Of the six publications released in the past year, information from three has been used by the local newspaper. The third response category, *policy response*, is especially difficult to measure as the impact of an *Infowatch* can take years for any effect. One example of how *Infowatch* has impacted on policy is provided by an issue on child pedestrian injuries. The issue was used as part of a community development project which targeted neighbourhoods where child pedestrian injuries were high,[14] and contributed to the decision of the local planning department to hold a public meeting at which the problems and solutions identified in the *Infowatch* were addressed. For the fourth response category on *education*, the *Infowatch* on alcohol abuse was used as the basis for a learning problem in the undergraduate medical program. Issues are also used as resource material for health science and graduate students. The fifth evaluative tactic included the distribution of one issue to public health professionals and *solicitation* for their comments. By request of the Chief Medical Officer of Health for Ontario, and the Association of Executive Directors of District Health Councils for the province, one issue was distributed to each of the province's 42 Health Units and 28 District Health Councils. Again, the publication was received favourably and stimulated interest in content and production.

CONCLUSIONS

By combining the skills of the producers and the needs of the users of health information, the *Infowatch* has been able to provide good community health information in a digestible form. The standardized format developed here has facilitated this process. In so doing, the link between health data and policy formulation has been strengthened.

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HPAU Infowatch

Health Priorities Analysis Unit
McMaster Faculty of Health Sciences

April 1989

> The HPAU Infowatch is an "experimental" newsletter of the Health Priorities Analysis Unit, designed to disseminate current, relevant health and social data similar to that which has or will appear in the Fact Book on the Health Status of Hamilton- Wentworth Residents. Infowatch will be distributed intermittently, depending on the availability of new data.

This first issue focusses on the Services for Seniors Study, a report of findings from the survey of seniors prepared by the Regional Municipality of Hamilton-Wentworth and the Hamilton-Wentworth District Health Council, October 1988.

Study Information

The Services for Seniors Study is part of a wider group of studies that include:

- o Waiting List Survey
- o Bed Accomodation Survey
- o Key Informants Survey
- o Telephone Survey of Seniors
- o Seniors' Workshops

In this issue we look at selected issues from one component: the telephone survey of 677 non-institutionalized residents 55+ years of age.

Sample:

- city of Hamilton = 400 (59%)
- Five surrounding municipalities in Hamilton-Wentworth = 277 (41%)

Questionnaire response rate = 60% (Response rates by age group were not reported, but usually diminish with increasing age. Rates of 80% or more are generally considered acceptable).

In the report discussion focused on the 65+ age group, representing 53% of those surveyed; a total of 359 respondents, only 35 or so of whom were 85 or over.

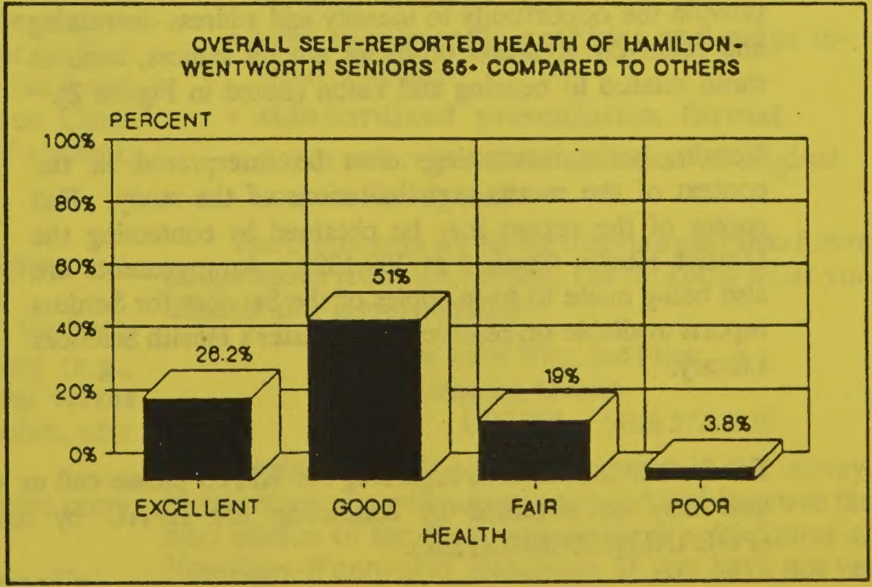
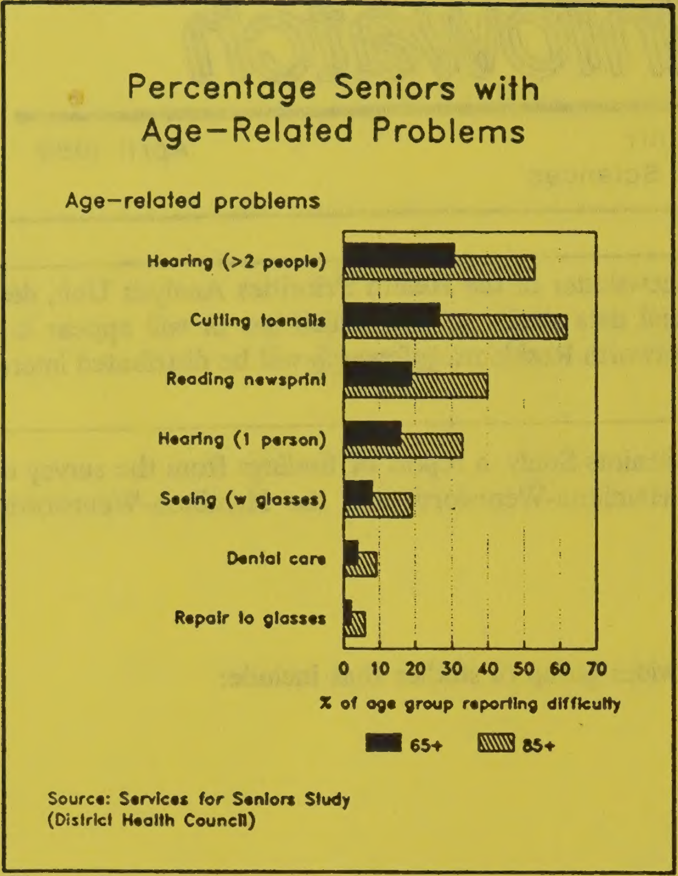


Figure 1

Perception of Health

Asked to compare their own overall health to others their age, the majority (77%) of respondents indicated that their health was either good or excellent; only 3.8% considered their health to be poor compared to others their age (Figure 1 above). There were no major differences in perception on the basis of age, according to the report.


Percentage Seniors with Age-Related Problems

Source: Services for Seniors Study (District Health Council)

Figure 2

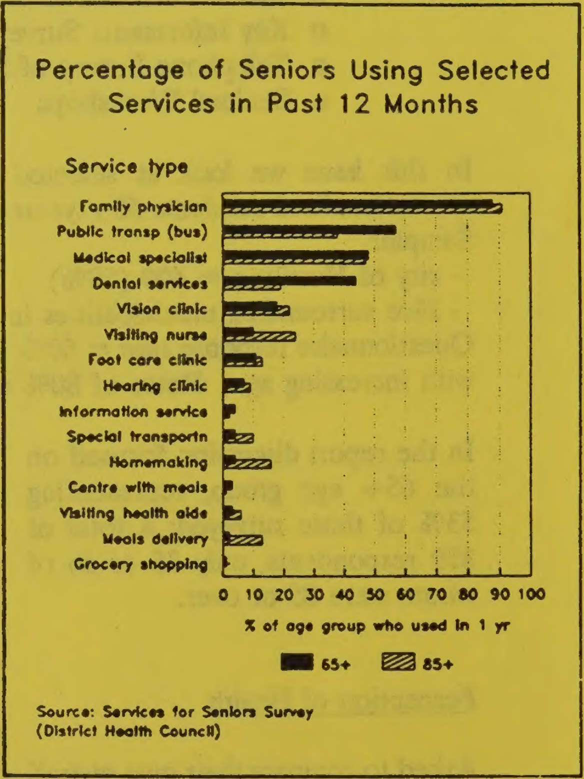
Health and Other "age related" Problems

When asked about difficulties with the items in Figure 2, 31% of those aged 65 to 84 years and 53% of those over 85 years identified hearing as a problem. Visual difficulties were reported by 27% and 59% of those aged 65 - 84 years and 85+ respectively. Thus, a relatively large number of seniors appear to experience these distressing and potentially disabling health problems, some of which, if identified, may be addressed.

Community, Social and Health Services Use

Figure 3 indicates that approximately 90% of the respondents visited a family physician at least once during the 12 month period prior to the survey. Such visits can provide the opportunity to identify and address distressing and relatively common problems among seniors, such as those related to hearing and vision (noted in Figure 2).

Results, while interesting, must be interpreted in the context of the merits and limitations of the study. Full copies of the report may be obtained by contacting the District Health Council at 389-1321. Arrangements are also being made to have copies of the Services for Seniors reports available on reserve at McMaster's Health Sciences Library.


Percentage of Seniors Using Selected Services in Past 12 Months

Source: Services for Seniors Survey (District Health Council)

Figure 3

For further information regarding the HPAU please call us at 572-7970. An information pamphlet on the unit may be obtained by contacting the HPAU by telephone, in writing, or via electronic mail (POLAND@MCMASTER).

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The HPAU is sponsored by the Educational Centre for Aging and Health, which was established in 1987 with funding from the Ontario Government

Infowatch

Health Priorities Analysis Unit
McMaster Faculty of Health Sciences

November 1989
Volume 1, Number 2

➡ *Survey Of Fact Book Users* ⬅

A 100-page *Fact Book on the Health Status of Hamilton-Wentworth Residents* was published by the Health Priorities Analysis Unit (HPAU) and distributed in the early part of 1989. The objectives of the Fact Book are:

1) to provide educators, health planners and service providers easy access to timely community health information that is collected on a routine basis;
2) to facilitate the communication of reports and study results on health status and health promotion in the Region; and
3) to provide an overview of some of the available community health information, while also enabling the reader to track down the original source before drawing conclusions.

Evaluation of the Fact Book

A survey, based on a stratified random sample of 90 Fact Book recipients was undertaken to assess its utility and impact on the education, service and research activities of users. Results indicate that the Fact Book is consulted and valued by users, and that it can alter people's approach to thinking on an issue. Comments fall into two broad areas: concerns of content, and those of presentation/format.

Results of Fact Book Evaluation

- Of 31 respondents, 22 (71%) reported that the Fact Book altered their approach or thinking (e.g., health/social service cooperation, regional versus provincial data, definition of target population, new resource for teaching).
- 10 reported that the Fact Book contents were complete.
- 10 reported the the Fact Book was 'user friendly'.
- 27 (87%) would purchase another edition when available.

Suggestions for Improvement

Content of the Fact Book:

- **completeness**, and the need for non hospital based health information such as lifestyle and environmental data.
- **classification** schemes provide little or no insight into the reality of human suffering (e.g., use of ICD-9).
- **comparability** in geographical units, and in the definition of health-related information, is needed.
- **continuity** of comparable data for determination of trends.

Format of the Fact Book:

- **aggregation** of data into relevant groups.
- more **interpretation** and **analysis** sections would be an asset.
- more user-friendly **graphics and maps** instead of tables.
- **standardized presentation format**
- retain **reference** documentation of original sources throughout.

The comments are being incorporated into future publications from the HPAU. Let us know what you think of this issue. We're at:

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Our thanks to all who participated in the survey. Your comments will serve to expand and improve the next edition of the *Factbook on the Health Status of Hamilton-Wentworth Residents*. If you have not yet received your copy of the Fact Book, it can be purchased from the HPAU (cost $5.00).

The Health Priorities Analysis Unit is sponsored by the Educational Centre for Aging and Health which was established in 1987 with funding from the Ontario Government.

Infowatch

Health Priorities Analysis Unit
McMaster Faculty of Health Sciences

December 1989
Volume 1, Number 3

➡Health of Seniors in North Hamilton ⬅

Survey Says. . .

In a recent survey of North Hamilton, people living in the area were asked questions about their health and things that are likely to affect their health (1). Here, we are going to look at the seniors in North Hamilton (those 70 years and over). After all ...

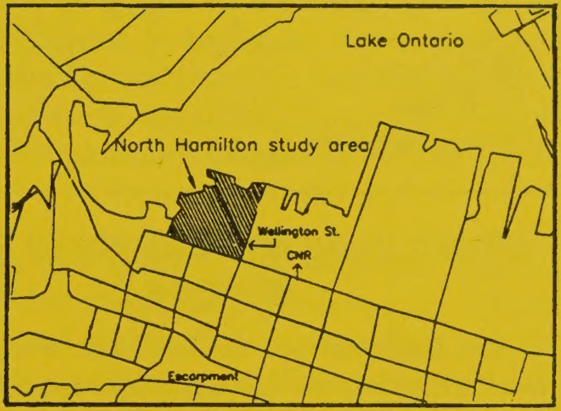
YOU'RE NEVER TOO OLD FOR HEALTH !

How do seniors rate their health ?

How you rate your health and how you say you feel is very important in predicting illness and even death (2-5). For seniors, a total of 61% of men and 36% of women rated their health as either poor or fair, rather than good or excellent. In contrast, an overall sense of positive (psychological) well-being is the experience of 56% men and 41% women in the 70+ age group, while 13% are "not too happy" (compared with 9% in the 18-34 age group).

23% of seniors need to stay indoors for most or all of the day because of their health and/or the weather. Between 15% and 21% had at least some difficulty with their vision, even with glasses. 7% have difficulty with their hearing. (Since there were higher refusal rates for telephone interviews among those with hearing difficulties, the data for hearing is not consistent.)

North Hamilton

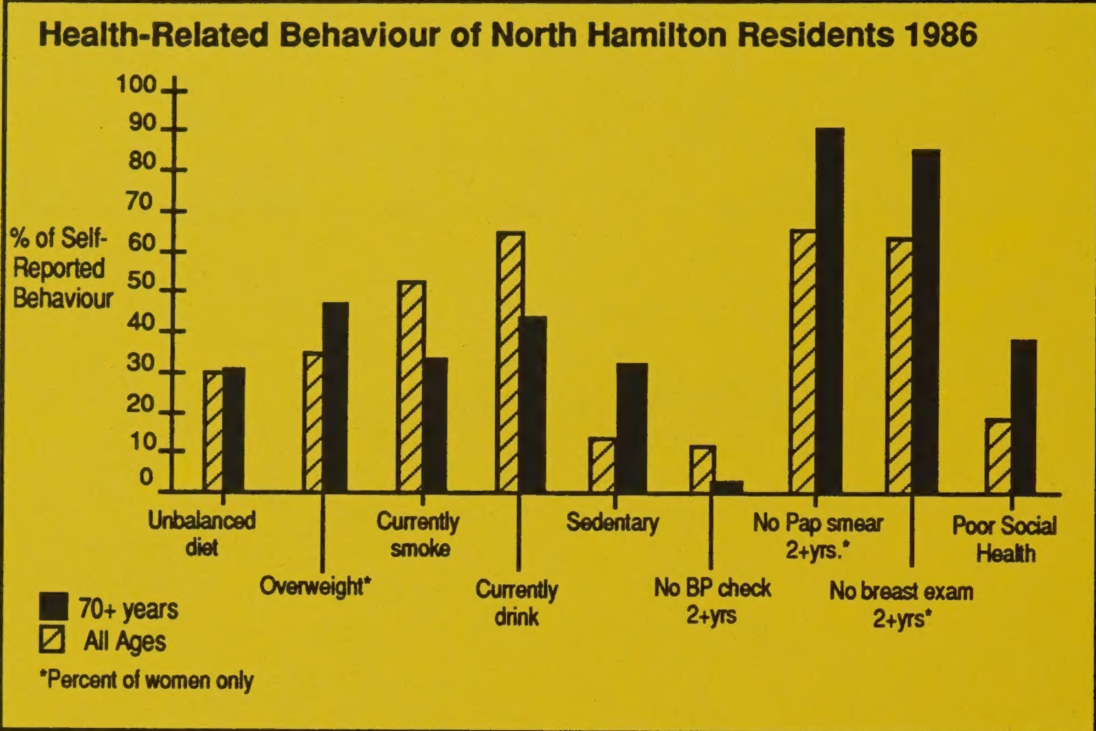


What about seniors'social life ?

Social contact and interaction make an important contribution to health – both to help with emotional support as well as to ease stressful situations when someone is ill (2,6). Of concern in North Hamilton is that only half as many seniors (36%) get together with friends every week compared to those aged 18-34 years (72%). And it gets worse: some 38% of seniors did not have a visitor in the past month; less than 16% had been out to visit friends or relatives during that time; and 4% had not used the telephone at all in the past month, most of these being women.

How many drugs do seniors use ?

Over two-thirds of North Hamilton seniors (70%) take a variety of drugs for their health problems. These may be prescriptions or "over-the-counter" medications (other than vitamins and minerals). Women of all ages use medication more than men – a common finding in surveys (7).



Notes for Graph:

Unbalanced Diet: those reporting sometimes, seldom or never eating a balanced diet.

Overweight: overweight or obese using Body Mass Index (weight+ (heightxheight)).

Currently smoke: smoke cigarettes.

Currently Drink: drink alcohol.

Sedentary: no active physical exercise, little light physical recreation, and light daily effort in work and at home.

No __ 2 Years: respondents not having health check within past 2 years.

Poor Social Health: have not been visited by anyone in the past month.

What's good and bad about seniors' lifestyle ?

In the chart above, we can look at a few things that affect health. Lifestyle is a term that health professionals often use when they talk about things that a person has direct control over. For example, what you eat and how much you drink tell about your lifestyle.

1. Diet

Eating a well-balanced diet, and maintaining ideal weight help to keep people of all ages healthy. A diet low in fats, sugar, and salt, with lots of fibre from fruits and vegetables is considered healthy. 70% of seniors think they always or nearly always eat properly. But, they may eat too much! Particularly elderly women 46% of whom are overweight or obese.

2. Nature's Beverage

Drinking several glasses of water a day is good for your health. But only one-third (37%) of all residents in North Hamilton drank even one glass or less of nature's goodness.

3. Caffeine

Instead of water, a lot of North Hamilton residents drink coffee - nearly one-quarter (23%) drink at least 4 cups a day. This is thought by some experts to be enough to be addictive and cause health problems (8). Even more caffeine is found in tea and soda pop.

4. Alcohol

The no-no's of drinking and driving have thankfully decreased impaired driving. Looking at all age groups combined for a moment, 15% of North Hamilton residents are at "high risk" of having health problems because of their drinking (9). Of seniors, less than one half (43%) drink alcohol. This is quite a bit lower than for all ages, which was nearly two-thirds of residents (64%). Of grave concern for the future is that the younger drinkers began drinking earlier (at around 17 years of age) than their older North Hamilton counterparts (at around 32 years of age).

5. Smoking

Everyone knows that smoking is bad for your health. Unfortunately, this addictive habit is hard to break. For instance, 33% of North Hamilton seniors still smoke, even though many may already have died an early death because of their smoking. Luckily, the quitting rates among seniors are now higher than all other age groups.

6. Physical Activity

Much to our shame, it seems that Toronto residents exercise more than residents of North Hamilton. On the other hand, the North Hamilton community does a lot of its exercising on the job. Since physical activity and health go hand in hand, active seniors should be more healthy. Unfortunately, about 1 in 3 seniors (32%) are sedentary (getting little exercise) (10).

What can seniors do to check on their health ?

1. Blood Pressure

Having your blood pressure checked is a good idea so you can find out whether you're at risk for heart disease or stroke. Thankfully, North Hamilton seniors frequently have their blood pressure checked - 98% had it checked in the past 2 years, though women were checked more than men.

2. Dental Health

An apple a day... and a yearly visit to the dentist are good ideas to stop dental troubles in the early stages. Unfortunately, less than 19% of those 65+, and only 43% for all ages, went to a dentist in the past year. For seniors, this compares to 25% for seniors throughout Canada (11).

3. Women's Health

In many countries, testing for breast cancer and cervical cancer is done to detect and cure the cancer in its early stages. Only 15% of elderly women had a breast exam (by a physician) in the past two years, and 3% have never had a breast exam at all.

Cervical cancer is detected by the Pap smear. Less than 10% of elderly women had a Pap smear in the past two years - a number that decreases with age. This compares to 24% of elderly women in Toronto (7).

How Can These Survey Results be Used ?

1. It appears that many elderly in North Hamilton get very little exercise and have less social interaction than other residents. To address both these needs, the North Hamilton community could, for example, establish a weekly seniors' walking group.

2. The lower use of preventive health care services raises questions about health care use in North Hamilton: is access to care a problem for seniors? The relationship between seniors' health and their use of health services is not fully understood and should be further studied.

3. Research has shown that self-rated health status is the single best predictor of future sickness and death (2-5). Given that nearly two-thirds of elderly men and over one-third of elderly women report fair-to-poor health status, this suggests that seniors in North Hamilton have substantial health needs and may warrant further investigation.

4. Since publication of the survey in the spring of 1989, the North Hamilton Community Health Centre has widely distributed survey results in the community. In addition, it has established committees of community, staff, and Board members to respond to 5 areas related to the health needs of the community:

   - Lifestyle Issues
   - Social Health
   - Health Promotion and Illness Prevention
   - Workplace Hazards
   - High Rates of Illness

For comparison of seniors in North Hamilton to all seniors in Hamilton-Wentworth, more information will be available once the results of the 1989 Hamilton-Wentworth Health Survey are completed later this year.

Watch for future issues of ***Infowatch***.

Survey Methods

The North Hamilton Community Health Survey report was prepared by Dr. Feightner and Dr. Rice for the North Hamilton Community Health Centre, and was released in 1989 (1). The report provides information on residents who were at least 18 years, while this issue of ***Infowatch*** has focussed on the elderly (those 70 years of age and over).

North Hamilton is primarily a working class area with residents having average lower income and education levels than for the Region of Hamilton-Wentworth. Unemployment, and the proportion of lone parent families, is about twice that of the Region (12).

In 1986, a random sample of 650 households was selected from City Property Assessment Rolls for residents of North Hamilton. One person in each household was randomly selected for interview: 505 interviews were completed by telephone (70%), or in person (30%): an overall response rate of 78%. Of the completed interviews, 14.7% (74) were for people 65 years of age and over. With this sample size, estimates are correct within 10 to 11 percentage points, 95 times out of 100.

The 122 questions in the survey covered the following topics: self-rated health status, lifestyle, health maintenance and prevention, health care utilization, medication use, and social health. Questions were drawn mainly from the Canada Health Survey (11), and community health surveys in Toronto (7) and Ottawa (13).

➜ Now Let's Hear From You ⬅

Your comments and suggestions are important to us and are being incorporated into publications from the Health Priorities Analysis Unit like this ***Infowatch***. Let us know what you think about this issue by writing or telephoning us, or place your comments in the drop box at the North Hamilton Community Health Centre.

Our address and telelphone number are:

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The Health Priorities Analysis Unit is sponsored by the Educational Centre for Aging and Health, which was established in 1987, with funding from the Ontario Government.

Infowatch

Health Priorities Analysis Unit
McMaster Faculty of Health Sciences

A Service of the Health Priorities Analysis Unit
To Inform People about Research in Health

Mayl 1990
Volume 2, Number 1

The Baby Boom to The Senior's Boom

The Problem:

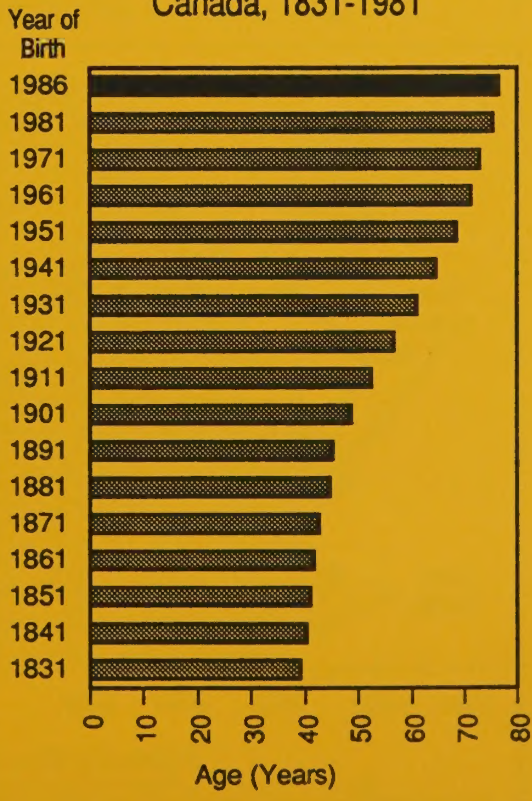
It seems remarkable that at the turn of the century, a person could expect to live less than 50 years (1). For a number of reasons, the life expectancy of Canadians, and Hamilton-Wentworth residents in particular, has continually improved throughout this Century. Now, with health care's increasing high cost technology, the blurring of the definition of "health" to include "social care", and an aging population, we are faced with some tough questions and choices regarding "health" and "quality of life".

But first, what does an "aging population" mean? What will be the impact on our community because of these changes? How does it affect us? And what can we do? This issue of ***Infowatch*** focuses on these questions in the hope that we will better understand and prepare for changes in the population structure of Hamilton-Wentworth residents. We should then be better able to meet the challenges that they will bring.

What Does An "Aging Population" Mean?

We have often heard that we are an "aging population". Simply put, this means that throughout the course of this century, we have both increased our average life expectancy and decreased the average number of children born to us. Let's first focus on the former. As you can see from Chart 1, average life expectancies have continually increased over successive decades for the past 160 years (1). Today, our children can expect to live to about 75 years of age, with females averaging 79 years and males 72 years. So, we are living longer...but are we healthier? This introduces the concept of *"Health-Expectancy"*.

Chart 1. Life Expectancy at Birth, Canada, 1831-1981

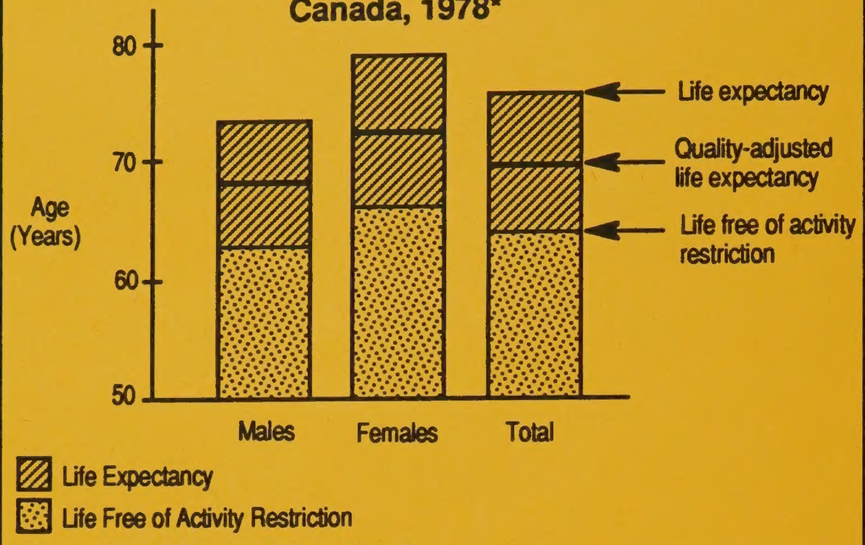


What is Health-Expectancy ?

Since health is essentially a continuum between life and death, there are many ways we can look at the level of health or the "quality of life". Wilkins and Adams (1983) (2) introduced the concept of health expectancy which combines life expectancy in each of several states of health and disability, and a weighted summary known as "quality-adjusted life expectancy" (QALE).

Chart 2 shows, in 1978 for both sexes, that QALE accounted for over 90% of total life expectancy. By age 65 years, one could expect some activity limiting health problem for about half of the remaining years of life.

Chart 2. Health Expectancy in Canada, 1978*



*Adapted from Wilkins and Owens, 1983.

We have already seen that we're living longer, but, while our lives have increased an average of 6 years in the past 25 years (data from 1951-1978), our expected years of disability-free life rose by only 1.4 years (2). Thus, about 75% of our increase in longevity consisted of increased disability expectancy. This is in contrast to the proposed "compression of morbidity" as outlined by Fries (1980) (3). So, we may be living longer, but we may not be healthy for the corresponding time.

How does fertility affect the aging of the population?

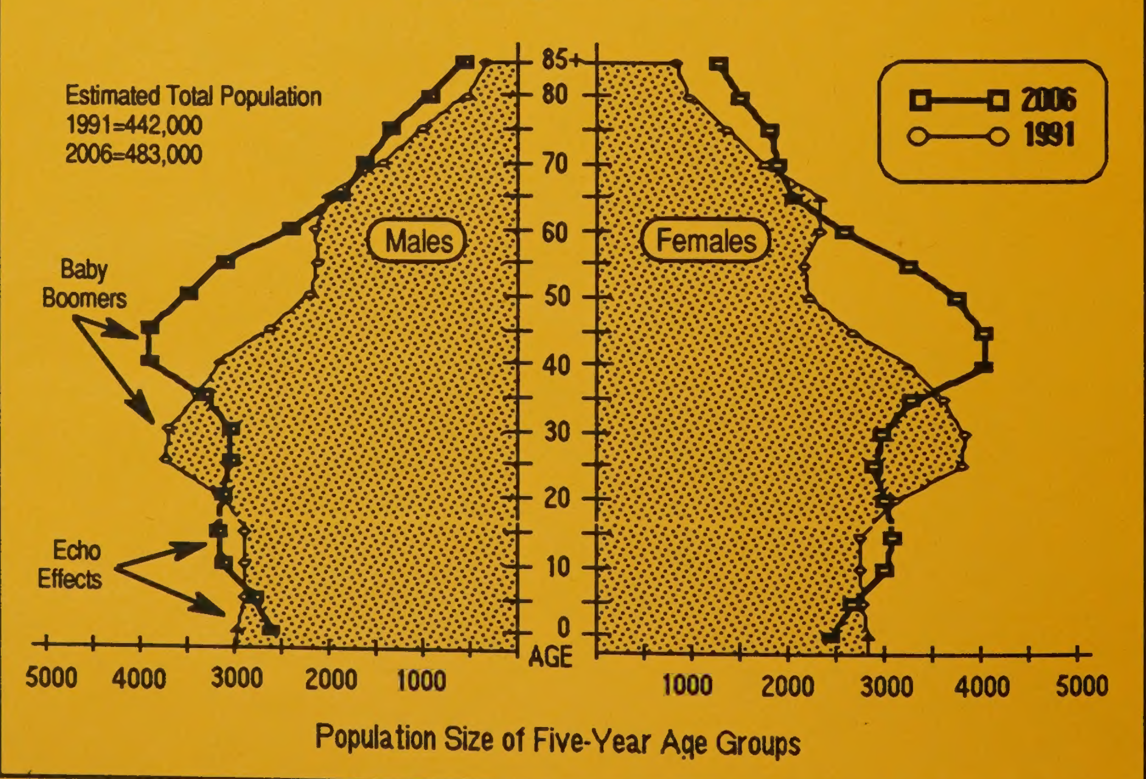
The strongest determinant of the age structure of a population usually comes from fertility. In the 20th century, Canada and Hamilton-Wentworth have experienced three peak periods of fertility:

- post-World War I (1920 to 1930)
- post-World War II (late 1940s to early 1960s) (i.e., Baby Boomers)
- children of the baby boomers (late 1970s on) (i.e., echo effects)

In order to see how these birth "cohorts" affect the age-structure, "population-pyramids" over time can be compared. These pyramids show the percent of people in each age group in the community. The dents and bulges show the waves of our population growth over time. Chart 3 shows the projected population pyramids for the years 1991 and 2006 (4).

Looking at the curve for 1991, the bulge at about 60 to 70 years corresponds to the first baby boom after World War I. The most predominant feature, however, is the World War II Baby-Boomers bulge at about ages 30-45 years. The last bulge was followed by a smaller bulge as the Baby-Boomers continue to have children, generally later in life.

Chart 3. Hamilton Wentworth Population Pyramids Comparing 1991 and 2006



Fifteen years from now, in 2006, the post-World War I cohort will increase the percent of very elderly (i.e., 80+ years) substantially. The Baby Boomers will be in the thralls of middle age, watching their children mature and young grandchildren grow.

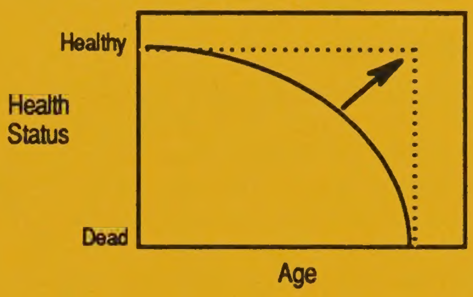
What will be the impact of these changes?

We have just seen that the population is aging as a series of dents and bulges, or waves and troughs. So, in the next 10 years, we can expect increases in the very elderly, middle age Baby Boomers, and adolescents. The magnitude of this increase can be seen in Chart 4 (5). There will not really be much of an increase in the number of seniors until the Baby Boomers reach retirement. As Charts 3 and 4 show, this will not occur until after 2010. However, the growth rate in those 80 years of age and over (the World War I Boomers) will increase dramatically between 2000 and 2010.

$ $ The question arises will health care costs skyrocket accordingly? The answer is that they should not. If we keep in mind the thought of population dynamics, and take a second look at Chart 4, we can see that while the 80+ group has increased, the 70-79 years of age group has decreased. Thus, if resources are continually reallocated as the population ages, then health care costs should remain fairly stable. However, the use of high cost technologies, particularly those with limited or unproven benefit, may continue to eat into the health care dollar as extension of life is sought, rather than maximizing the quality of existing life.

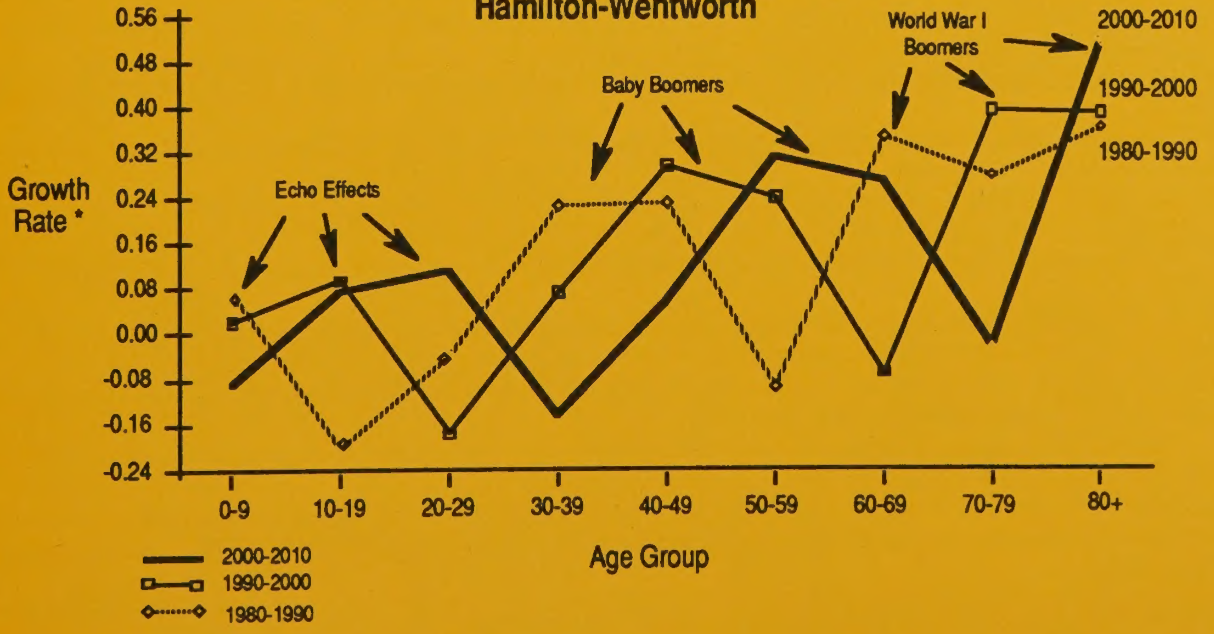
We are also experiencing a great deal more, possibly the greatest, awareness of "health" than we have ever experienced. Might the 25-45 age group, therefore, be healthier seniors? According to Fries (3), the answer is yes. As more and more people participate in "healthy-behaviours" (e.g., quit smoking, exercise more, drink less and not while driving, improve prosperity), then we should reduce morbidity and premature mortality. This is known as *"Compression of Morbidity"*, and, in simple terms, shows that if we practice preventive health behaviours, we should reduce sickness such that we are basically healthy until we die. In other words, the morbidity curve approaches a rectangular shape (see Chart 5).

Chart 5. Compression of Morbidity



At present, we do not know how close to a rectangle the curve is. We do know that more people are living healthy lifestyles at all age groups (6). For example, the 80+ age group has improved its prosperity in later life through pensions (see next page). Given the association between health and income, this can be taken as a positive health indicator. However, our past sexual biases may come back to haunt us as this largely female group has only been able to join pension plans at their workplace for the past 20 years or so.

Chart 4 . Growth Rate per Decade by Age Group, Hamilton-Wentworth



* Growth Rate was calculated by dividing the difference between the populations at the beginning and end of the decade by the populaton at the beginning of the decade.

How will this affect Hamilton-Wentworth?

1. Business

The number of young workers and labour force growth will diminish during the 1990s but, owing to our close proximity to Toronto, our growth will likely be higher than that of the province and country. In particular, the number of middle income jobs is expected to grow in the next 10 years *if* affordable housing remains available. This is because the high cost of living in Toronto will result in that city being home only to the rich and the very poor (7). Thus, the need for job creation will decrease as our growth slows.

2. Housing

As we have seen in the past few months, housing sales will stabilize as a result of both economic and demographic factors (7). The problem in the 1980s causing skyrocketting prices was that demand exceeded supply, owing to Baby Boomers delaying the purchase of their first house until the 1980's. Through the 1990s, this should balance out but is subject to both in- and out-migration to the area. In addition, as the World War I baby boomers become very elderly, and require more supportive care, many of their single-family dwellings will be made available.

3. Family

Single incomes among two-parent families will become increasingly rare in the 1990s. The rate of increase of children will fall over the next 20 years (see Chart 4) which will have implications for the number and size of school classes. Divorce rates are expected to remain steady, or even fall, as the number of people at high risk of divorce (i.e., aged 20-35 years) decrease. Similarly, the crime-prone age-group (18-30 years) will also diminish proportionally (7).

$ $ 4. Money

The investment pool should increase as the middle age Baby Boomers pay off their debts and begin saving for their retirement. The World War I Boomers (the 80+ years group) should generally be in good financial shape owing to the high proportion of retirees covered by private pension plans, and the high number of homeowners. Thus, social security will increasingly become a smaller percentage of a seniors income as they are able to live off the savings and pension plans earned during their lifetime (7).

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Health Priorities Analysis Unit
McMaster Faculty of Health Sciences

A Service of the Health Priorities Analysis Unit
To Inform People about Research in Health

July 1990
Volume 2, Number 2

Children Can't Fly

- Child Pedestrian Injuries -

SCHOOL
Yield
STOP

What's this issue about ?

This issue of ***Infowatch*** looks at childhood pedestrian safety. First, we identify individual children who might be at increased risk of pedestrian injury, and why this could be. For example, where children live, their age, and family characteristics all influence a child's risk of having a pedestrian injury.

Second, we ask your help in trying to think of and implement ways to reduce the number of injuries among these children. This could be accomplished by taking leadership in community strategies directed at such things as:

- *Enforcement and Laws*
- *Engineering and Technological Changes*
- *Education about the Safe Practices*

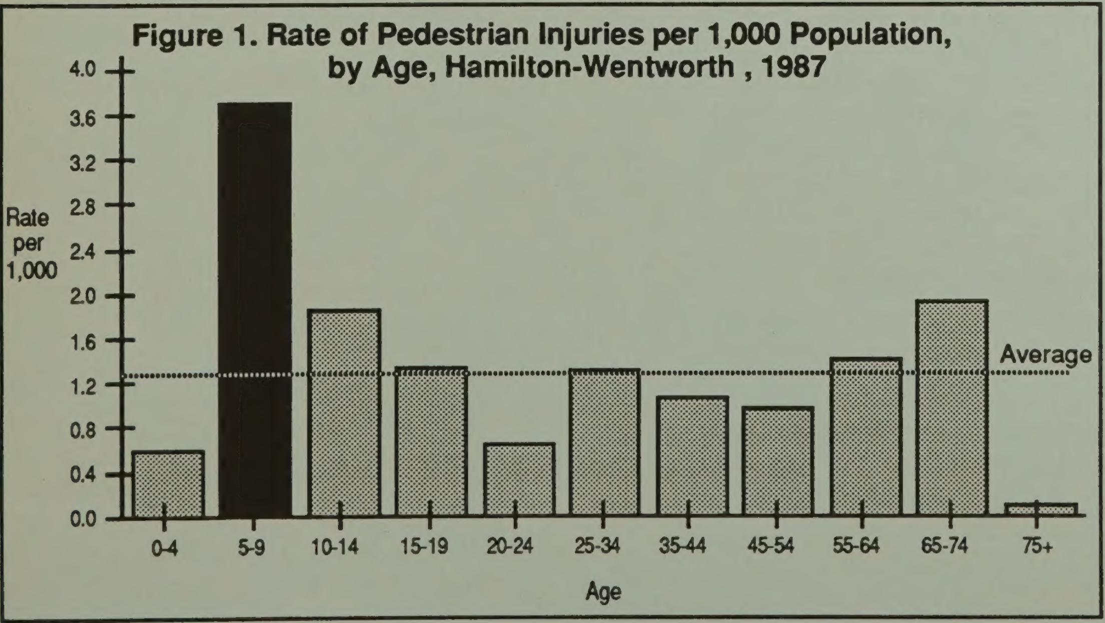


Figure 1. Rate of Pedestrian Injuries per 1,000 Population, by Age, Hamilton-Wentworth , 1987

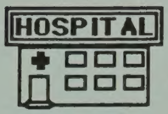
How Big is the Problem ?

After a baby has survived his or her first year, and begins to explore the world around them, injuries and collisions become an increasing part of the young persons existence. However, it is seldom realized that the greatest loss of life in childhood is by far the result of injuries and death due to accidents, poisonings, and violence (1). Within this group, injuries from collisions with motor vehicles rank as the most common cause of death.

At What Age do Most of the Injuries Occur ?

Collision data in Hamilton-Wentworth for 1987 reported that children aged 5-9 years received pedestrian injuries three times more often than all other ages (see Figure1). This is equivalent to a rate of 3.6 per 1,000 children.

As shown in Figure 1, other age groups affected above average included the 10-14 year olds, and seniors, 65-74 years. But these rates were about half of those observed for the 5-9 year old age group. As a result, this ***Infowatch*** will focus only on these young children, that is, the 5-9 year olds.



Were the Children Badly Hurt ?

Of the 5-9 year old children who were injured as pedestrians in 1987:

- 32% (22 of 70) were not hurt badly enough to be sent to the hospital.
- 50% (35 of 70) had minor injuries (they were taken to the hospital but were not admitted).
- 17% (12 of 70) had major injuries (they were taken to the hospital and admitted).
- 1 child died.

These 70 injuries include only those that were reported to the police. This is likely an underestimate of the actual number of pedestrian injuries since many collisions go unreported.

In 1985, the Hamilton-Wentworth Collision Report (2) found that of 86 children aged 5-9 years involved in pedestrian collisions:

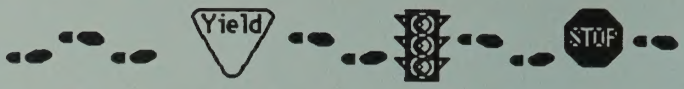
- 85% (71 of 86) had done something unsafe (e.g., crossing the street against the light).
- 59% (51 of 86) involved children running onto the road from between parked cars.
- 48% (42 of 86) occurred in the hours after school (3 to 6 p.m.).

Where Do Most of the Collisions Happen ?

Regional police report pedestrian injury among children 5-9 years old to be very common in a few neighbourhoods in the city of Hamilton (see map on last page). (Injuries were not common on Hamilton Mountain.) For these few city neighbourhoods, at least two of the three following characteristics were apparent:

- more than 10 children in this age-group were hit by a car during the three years, 1985-1987
- at least 24 collisions per 1,000 children occurred during the same three year period.
- the neighbourhoods were very densely populated with more than 6,000 people living per square mile.

In addition, residents are often economically overburdened as compared to other areas of Hamilton-Wentworth (3). For whatever reason, the children who live in these high pedestrian injury areas, and perhaps their families as well, are at high risk of pedestrian injury.



Is it the Fault of the Roadway Environment?

Injuries occur when the roadway environment is unable to protect pedestrians, thereby failing to control for the dangers of traffic flow.

1. High Volume of Traffic

More vehicles, and driving at high speeds are associated with increased collisions and injuries (4).

2. Roadway Dangers

Roadway lighting and markings, signs, pot-holes, curves in the road, and pedestrian walkways such as those located near schools are examples of the roadway contributing to vehicle-pedestrian collisions (4).

What About Driver Error?

Of course, the cause of pedestrian injuries in children is often the responsibility of the driver. Driver error can be blamed for at least 21% of child pedestrian injuries (5,6). Speeding, failing to give the right of way, and ignoring traffic signals are just some of the errors that many drivers routinely commit which could lead to a collision.

We Can't Blame the Children

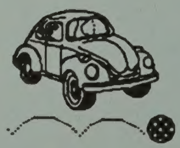
While thinking about ways to reduce the number of child pedestrian injuries, we must realize that focusing on (or blaming) the children will do little good. If interventions are to work, they should be aimed at changeable or modifiable characteristics. The problem is that the things which make 5-9 year olds more likely to be involved in collisions may not be modifiable. These include such things as:

1. *Judgement and Perception*

Many children in this age group have not yet learned how to use their hearing and vision to tell how far away a car is, how fast it is going, and when will it get to them (7). Both of these senses are needed to judge perception, and these young children have not yet had time to fully learn these skills.

2. *The Concept of "Danger"*

Children often learn through trial and error: associating the word hot with the feeling when fingers are touched or put near a stove burner. Similarly, the 5-9 year olds may not fully realize the danger of motor vehicle traffic. After



all, cartoon characters often get hit and walk away. Since children learn through experience and positive encouragement, they need constant reminders of the real dangers of traffic.

3. *Natural Exuberance, Curiousity, and Playfulness*

In addition to children's physical and cognitive immaturity, this is also a period of time when the child's natural curiosity and exuberance often play a stronger role than safety and caution.

4. *Other Factors*

Of interest to those planning prevention strategies is that children who come from low income, or single-parent families, and those living in crowded households, have higher traffic injury rates than families that do not have these characteristics (5,6). Housing density has also been found to affect a child's risk of injury (6).

Is The Onus On The Community?

Communities can ignore or have priorities in other areas than pedestrian injury reduction. For example:

- Police time devoted to traffic control may be given a lower priority (4)
- Fines and penalties to drivers may be too low to act as deterrents to promote safer driving (4).
- Transportation planning may not exist or is not conducted in cooperation with other planning divisions.

Possible Community Strategies...

At the beginning of this issue, we talked about 3 ways or strategies which, used together, could assist in reducing the number of child pedestrian injuries .

1. Enforcement and Laws

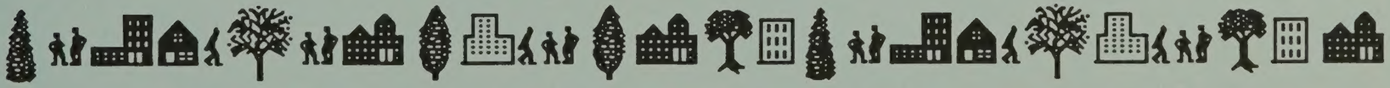
Laws to reduce the speed limit, increase the number of stop signs and pedestrian crossings, as well as installing caution lights over intersections, will only work if drivers obey them. Greater police surveillance may be required for both existing and any new laws that are made in order to ensure drivers comply.

2. Engineering and Technological Changes:

Here, we could try to change the flow of traffic in and around the high risk neighbourhoods. This would then separate the children from the vehicles. Another way would be to change the flow of children! For example, using volunteers to walk children to and from school, more crossing guards, placing entrances to play areas on quiet streets, and offering lunch and after school programs in elementary schools would give children somewhere to play and keep them off of the streets.

3. Education:

Here we could teach children and parents to be safer pedestrians. We should also remind ourselves to be better drivers and be alert for people who may surprise us by running or walking into traffic.



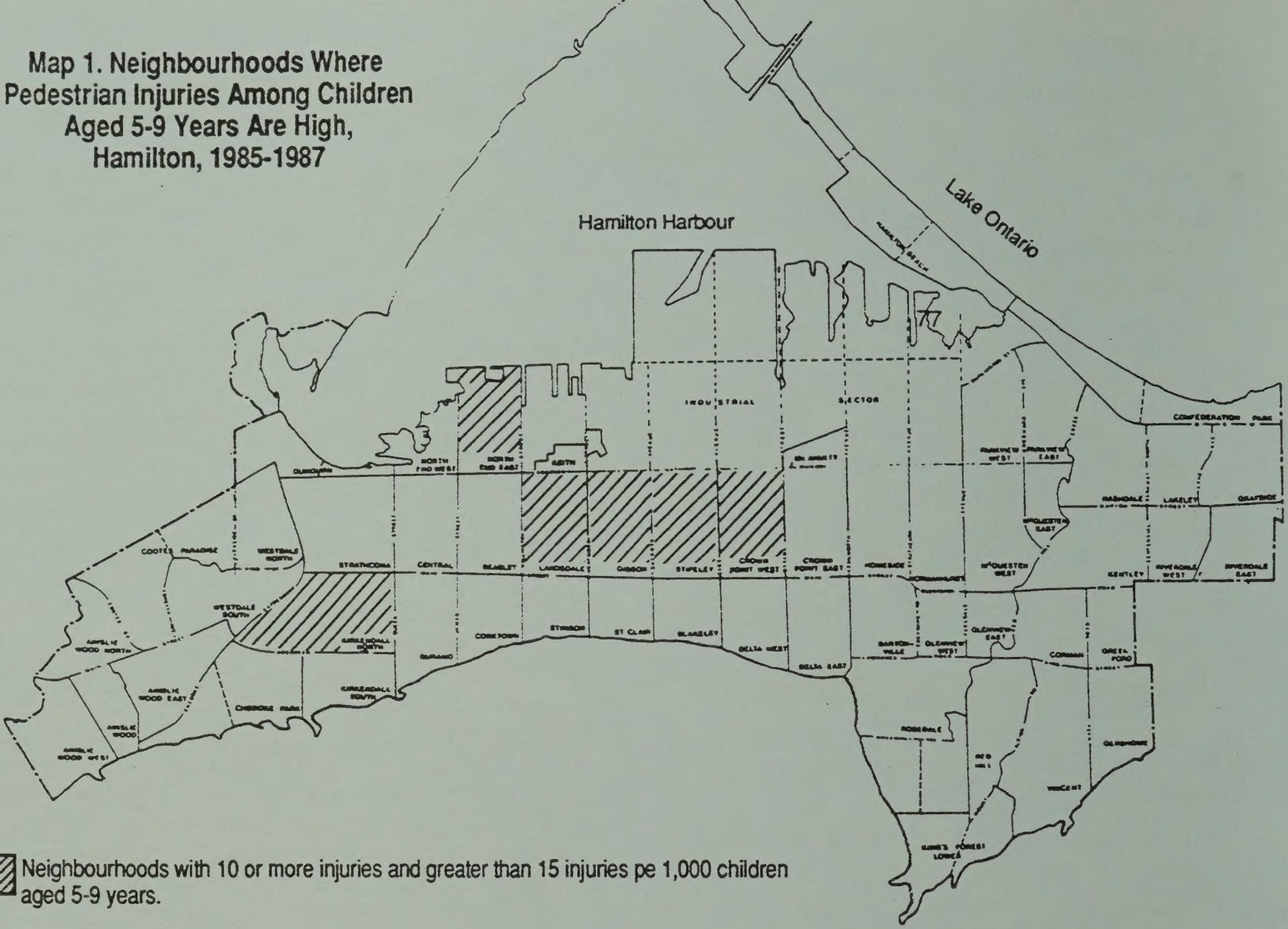
Children Need Our Help To Increase Pedestrian Safety

The Regional Department of Public Health Services would like to assist in strengthening the community action of citizens in the neighbourhood where the problem is the most serious. For example, the Department is willing to assist in the development of Citizen Action Groups (CAG). Such a group could then design and run a "Child Pedestrian Injury Prevention Program" for their neighbourhood. A Regional Advisory Committee (RAC) made up of people already working in the area of pedestrian safety is in the process of being formed which will be available to the CAG's when needed. The **goal** of the CAG's would be to lower the number of pedestrian injuries among 5-9 year old children in neighbourhoods where the number of accidents is unacceptably high.

If you, or others in your community, would like more information about the ***Child Pedestrian Safety Initiatives Project***, or would like someone to speak to your community about this serious health problem, the Hamilton-Wentworth Department of Public Health Services would like to hear from you. Please call:

Kim Sheppard, Department of Public Health Services
25 Main Street West, 4th Floor
Hamilton, Ontario
L8N 3P6
528-1441 ext.232

Map 1. Neighbourhoods Where Pedestrian Injuries Among Children Aged 5-9 Years Are High, Hamilton, 1985-1987



▨ Neighbourhoods with 10 or more injuries and greater than 15 injuries pe 1,000 children aged 5-9 years.

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Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A Service of the Health Priorities Analysis Unit
To Inform People about Research on Health

October 1990
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Cigarette Smoking in Hamilton-Wentworth

Hamilton Butts Out?

What's this issue about?

Overwhelming research evidence shows that inhaling cigarette smoke, your own or someone else's, increases your risk of illness and premature death (1). Yet millions of people smoke, exposing themselves (and others) several times daily to chemicals which cause heart disease and cancer. So, why don't they quit? Among many reasons, smoking is an addiction. Therefore, when a person stops smoking, he/she will experience physical and psychological symptoms that are not pleasant (1).

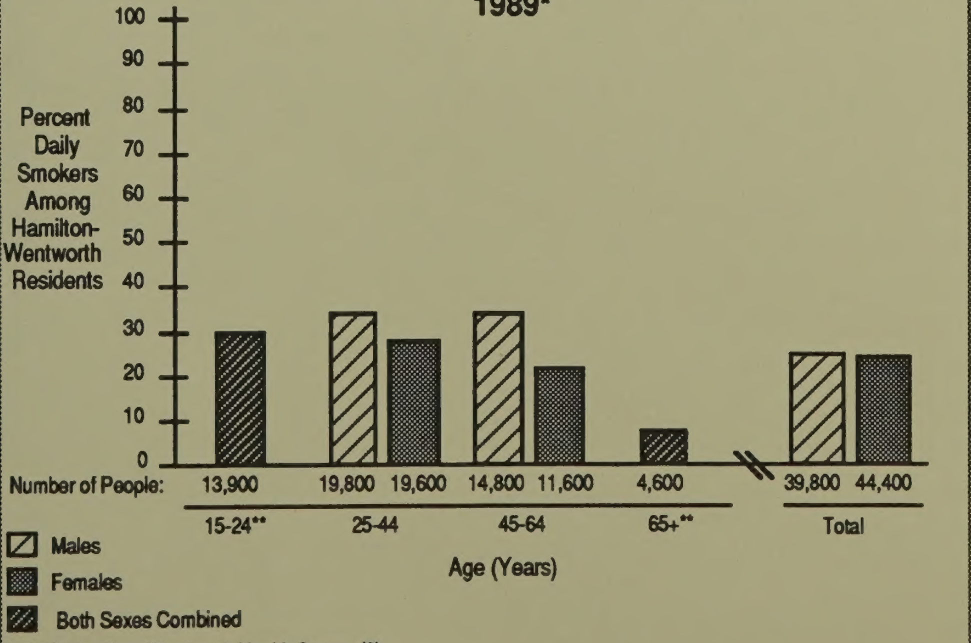
Nevertheless, in recent years, through vigorous health promotion campaigns the number of smokers has decreased in the 1980's (2). This INFOWATCH uses results of the 1989 Hamilton-Wentworth Health Survey (H-WHS), and focuses on how many citizens of Hamilton-Wentworth smoke, the characteristics of these smokers, and how our smoking rates compare to other regions of Canada. In addition, information on current programs and methods aimed at reducing smoking will be discussed.

Who Smokes?

About 1 in 4 residents of Hamilton-Wentworth, over the age of 15, smoke daily (see Chart 1). Here, "smokers" refers to daily smokers. Overall, this is roughly evenly split between males and females. However, the pattern by age is different between the sexes, with female smokers tending to be younger than male smokers (data not shown in Chart). More young women smoking than young men has been observed in a number of recent studies (4) and has resulted in an increase in the occurrence of lung cancer in females (5). In the 1990's, death rates for lung cancer in females may surpass those for breast cancer (5,6).

Smoking among people 65 years of age and over is quite low (7%). There are fewer smokers than in younger age groups, in part because many of the smokers will have already died from smoking-related illnesses such as cardiovascular diseases, cancers of the lung, mouth and upper respiratory tract, bronchitis, emphysema, and others (1,7).

Chart 1. Daily Smokers by Age and Sex, in Hamilton-Wentworth, 1989*



* 1989 Hamilton-Wentworth Health Survey (3).
**Males and females were combined for these age groups owing to small numbers. Figures should be used cautiously.

Smoking and ...

Smoking is widespread throughout our culture. While at one time the social image of smokers was glamorous, now smoking is less often socially acceptable. The recognition of the harmful effects of smoking has convinced many people to quit. Occasional smokers (less than daily) are grouped with non-smokers.

... *Marital Status*

Married people are less likely to be smokers (22%) than people who are single (27%) or who were previously married (34%) (see Chart 2). A higher percent of smoking among separated, widowed and divorced people has been found elsewhere (8). It has been suggested that these people may be more economically disadvantaged, and less motivated to improve their health (see August 1990 INFOWATCH).

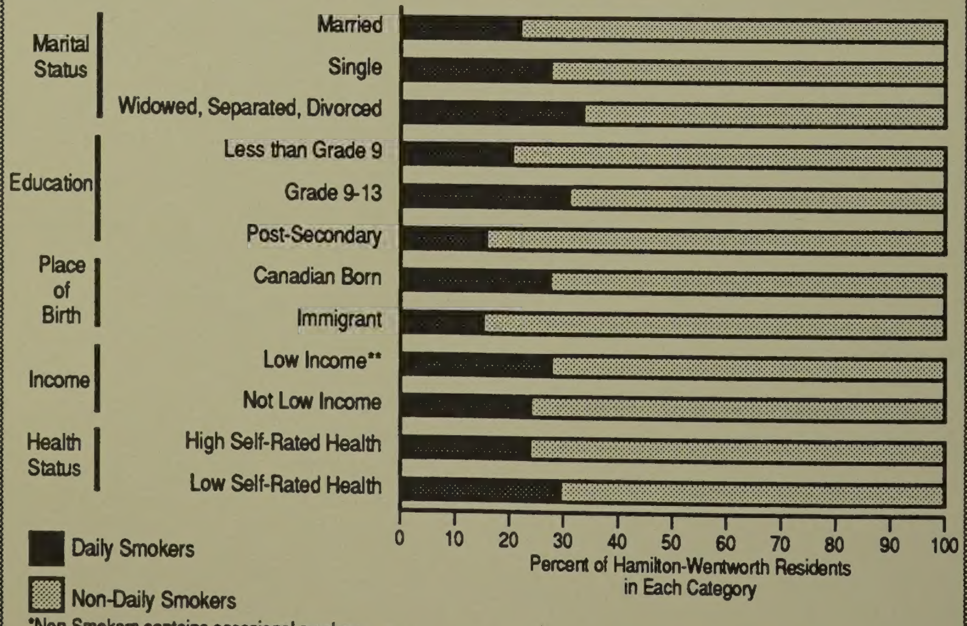
... *Education*

Citizens with post-secondary education are less likely to be smokers (16%), than those whose highest level of education is between grades 9 and 13 (31%) (see Chart 2). Those with less than grade 9 education are in the middle with 21% smoking. This pattern has been observed in other surveys (7).

... *Immigrant Status*

More Hamilton-Wentworth residents who were born in Canada smoke than do immigrants to this country (29% versus 19%, respectively) (see Chart 2). The reasons for this are not clear.

Chart 2. Characteristics of Smokers versus Non-Smokers*, Hamilton-Wentworth, 1989



*Non-Smokers contains occasional smokers.
** Low Income is based on the poverty line for 1989, and adjusts for family size (3).

... *Income*

Citizens living in low income households (28%) smoked slightly more than those not living in low income households (24%) (see Chart 2). Low income was based on 1989 poverty line estimates, and accounted for family size and the population size of the community (2,9). However, the very poor (based on a Statistics Canada index) (10), smoked more than any other category (38.1% for males and 58.2% for females) (not shown in Chart 2). This confirms the findings of a national survey which was conducted in 1985 (10).

... *Self-Rated Health*

Citizens who rate their health as fair or poor are more likely to be smokers (31%) than those who rate their health to be good or excellent (24%) (see Chart 2).

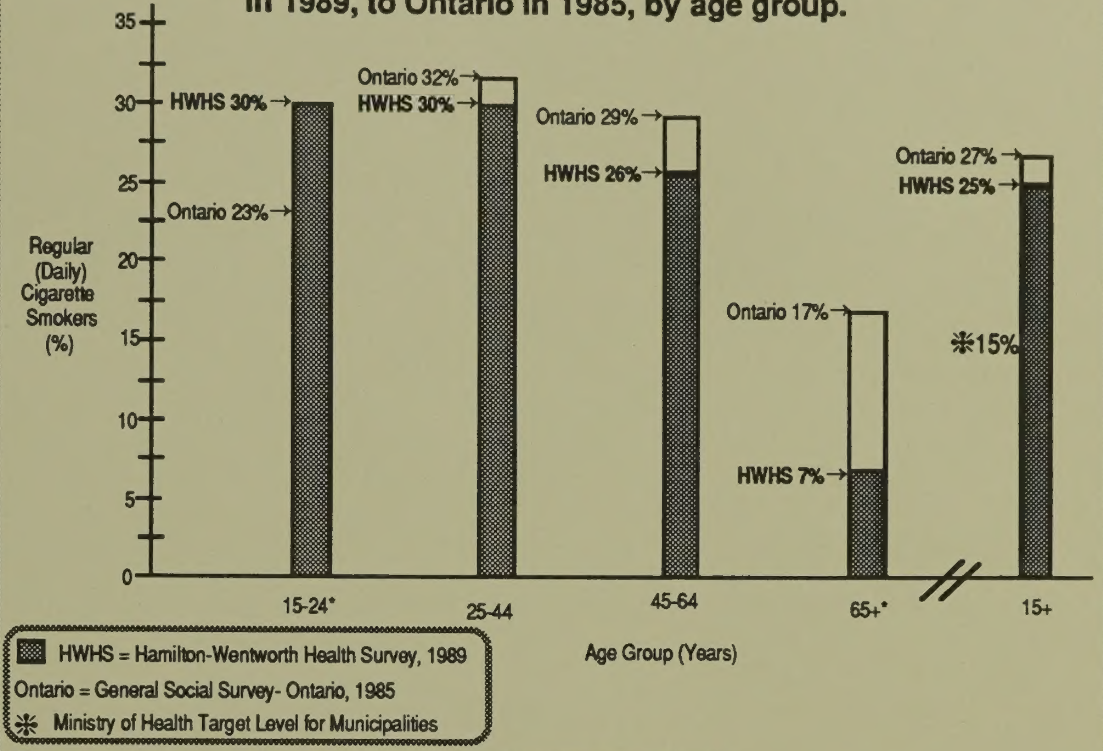
Do Residents of Hamilton-Wentworth Smoke More or Less Than Other Areas?

Tobacco consumption in Canada has been decreasing throughout the 1980's, and, in 1989, the largest drop ever in per capita tobacco consumption was recorded (3). Along with this, the percentage of smokers has been decreasing. For example, the 1978-1979 Canada Health Survey reported that 37% of Canadians smoked cigarettes daily (11). By 1985, the Canadian General Social Survey reported 30% of Canadians and 27% of Ontario residents smoked daily (12). The 1989 Hamilton Wentworth Health Survey (H-WHS) reported that 25% of residents smoke daily (Chart 3).

Chart 3 shows that smoking is still quite common in Hamilton-Wentworth among young adults (that is, those 25 years of age and under). Recent studies have shown that the earlier in life one begins to smoke, the more addictive it will become (1). However, as noted on the chart, the number of young respondents to the H-WHS was small thereby requiring cautious interpretation. In support of the H-WHS, the Health Promotion Survey found that about 35% of Canadians aged 15-24 years smoked in 1985. Like the H-WHS, little difference in overall smoking rates was observed between those 15-24 years and those 25-44 years.

Seniors in Hamilton-Wentworth were less likely to be smokers than any other age group. This may be due to higher quitting rates among seniors or, more likely, a higher proportion of smokers than non-smokers have died in the 65 years and over age group (1). However, seniors like younger groups, have less disease and live longer if they stop smoking (1).

Chart 3. Comparison of the number of smokers in Hamilton-Wentworth in 1989, to Ontario in 1985, by age group.



* These percentages were based on small numbers, and should be interpreted cautiously.

What can/is being done to reduce smoking in Hamilton-Wentworth?

Three major areas are being targeted to try to reduce the number of smokers in Hamilton-Wentworth. These are:

1. 🚭 and Children

The younger children begin smoking, the more difficult it is for them to stop (13). As schools include more smoking prevention material in to their curriculae, and legislation prohibiting the sale of tobacco products to minors is enacted, studies are also examining approaches to reduce the number of children who start to smoke (13,14). For example, in collaboration with the Hamlilton-Wentworth Department of Public Health Serivces, some schools in Hamilton-Wentworth are participating in a study initiated by Waterloo University which is examining the effectiveness of educational methods to stop children from begining to smoke (13). In addition, upon request, the Lung Association Hamilton-Wentworth conducts smoking cessation programs in Hamilton and area high schools for students seeking help to stop smoking. Support for staff is also available.

2. 🚭 and Young Women

To try to curtail the alarming increase in smoking among young women, several strategies are being used. Public health nurses inform prospective and new parents on the benefits of non-smoking during prenatal and postnatal classes, as well as with individuals during home visits. Smoking cessation programs are encouraged and utilized by a wide range of community groups, businesses, and institutions.

3. 🚭 Legislation

Within Hamilton-Wentworth, some by-laws have been implemented and others proposed with the aim to reduce exposure to smoke in the workplace and in public places. In addition, licensing of stores selling tobacco products, the enforcement of laws prohibiting the sale of tobacco products to minors, and increasing the associated fines for not adhering to these laws, are a few of the regulatory methods proposed to reduce the availability of cigarettes.

Nationally, the increase in tax, the requirement to list tar and nicotine content, and the larger, more prominent display of warnings on packages, are methods to reduce smoking as well as inform smokers of the hazardous effects of their habit.

4. 🚭 Hamilton-Wentworth Interagency Council on Smoking and Health

An association of agencies involved in the campaign against smoking, the Council carries out programs to attain a smoke-free enviroment. Examples include: the community-wide arrangements for National Non-Smoking Week, legislative lobbying at all levels of government, and heightening public awareness of the health hazards of tobacco use.

For further information about any of the above activities, please call us at 546-3620.

1989 Hamilton-Wentworth Health Survey - Methods

The 1989 H-WHS originated as a pre-test for the 1990 Ontario Health Survey (OHS) and was conducted during the month of May, 1989 (15). The goal of the OHS, and this pre-test was to gather baseline population data on the determinants of health and the physical, mental, and social health of the residents of Ontario.

Data were collected by both an interview (IAQ) and a self-administered questionnaire (SAQ). The IAQ involved gathering data on all members of a household from a single knowledgeable member of the household, while the SAQ was left for each member of the household who was at least 12 years of age and over to fill out and mail back to the study centre. Whenever possible, questions used in the survey were abstracted from previously administered surveys to ensure comparability. The sample of the H-WHS included 896 people who completed the IAQ (response rate = 86%), and 603 persons who completed the SAQ (response rate = 67%). Only those completing both questionnaires and who were 15 years of age and over were included in the analysis resulting in 578 subjects, with slightly over half being female (56%). With this sample size, estimates are correct within 3 to 4 percentage points, 95 times out of 100. A comparison of these respondents with the 1986 Census data for Hamilton-Wentworth residents revealed no differences on variables such as sex, income, and education. (H-WHS respondents were slightly older than that reported by the Census).

The preparation and field work of the H-WHS was funded by the Province of Ontario through the Ontario Ministry of Health and was conducted by Statistics Canada. See Chambers and Reynolds (3) for a full report on the survey methods.

➡ Now Let's Hear From You ⬅

Your comments and suggestions are important to us and are being incorporated into publications from the Health Priorities Analysis Unit like this ***Infowatch***. Let us know what you think about this issue. Our address and telelphone number are:

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The Health Priorities Analysis Unit is sponsored by the Educational Centre for Aging and Health which was established in 1987 with funding from the Ontario Government. Support is also received from the Faculty of Health Sciences, McMaster University, and the Hamilton-Wentworth Department of Public Health Services.

Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A Service of the Health Priorities Analysis Unit
To Inform People about Research on Health

December 1990
Volume 2, Number 5

Hamilton-Wentworth On the Rocks?

Alcohol (Ab)Use in Hamilton-Wentworth

What's this issue about?

Alcohol consumption is widespread throughout our culture. The Addiction Research Foundation classifies people as abstainers, social drinkers, problem drinkers - heavy drinkers but able to control drinking, and alcoholics - unable to control drinking (1). Given that people have react differently to the effects of alcohol, assessing where people and communities stand along this continuum is often difficult. This ***Infowatch*** uses results of the 1989 Hamilton-Wentworth Health Survey (H-WHS) to examine alcohol abuse in Hamilton-Wentworth.

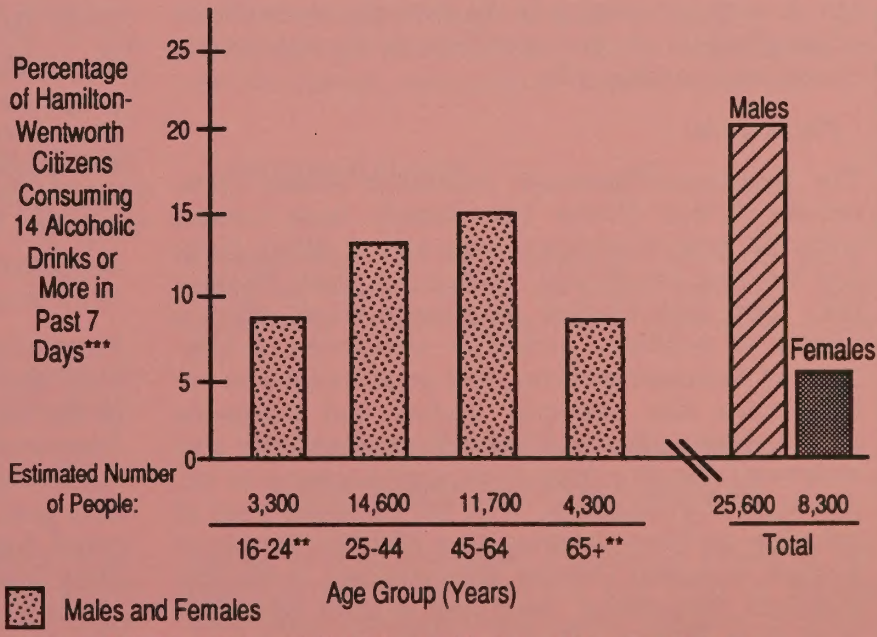
Who Drinks?

An estimated 81% of Hamilton-Wentworth citizens report drinking in the past year, roughly evenly split between males and females. However, the amount of alcohol consumed differs significantly between the sexes (see Chart 1).

Overall, about 1 in 17 females (6%) consumed 14 drinks or more in the past week. In contrast, about 1 in 5 males (20%) report to be such heavy drinkers. Here, "heavy drinkers" are defined as those consuming 14 drinks or more in the past week. Males between the ages of 25 and 64 are most commonly found to be heavy drinkers. Across every age group, more males are found to be heavy drinkers than females (not shown in Chart 1).

A similar number of citizens are alcoholics and/or have binged on 10 or more drinks in the past year (2). In contrast, estimates of heavy drinkers using alcohol sales data (23%) are somewhat higher than those reported

Chart 1. Percentage of Heavy Drinkers Among Hamilton-Wentworth Citizens, by Age or by Sex, in 1989*

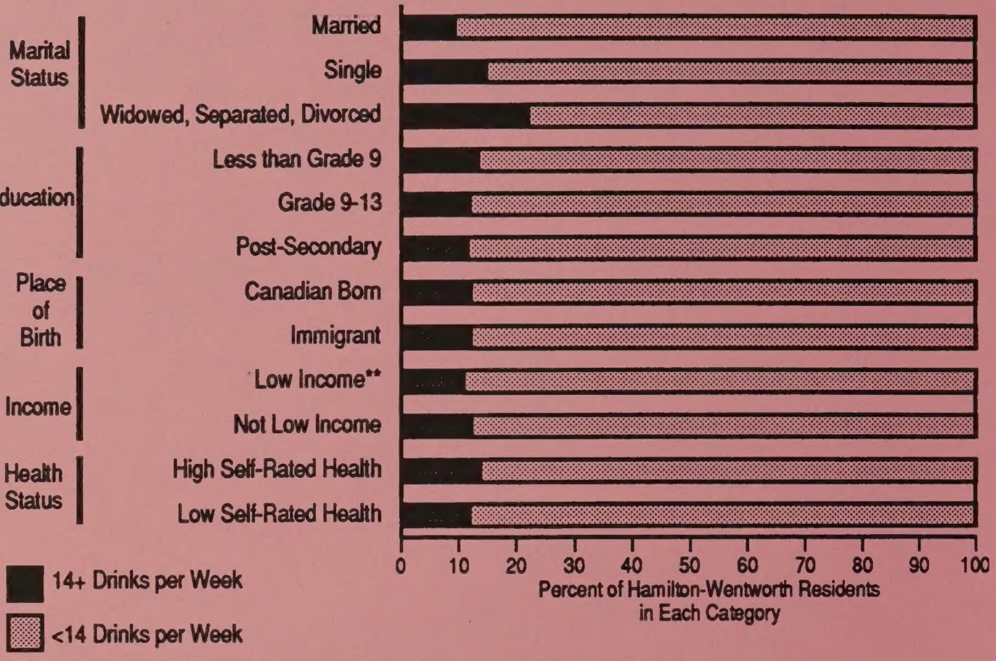


* In the 1989 Hamilton-Wentworth Health Survey (3), "heavy drinkers" are defined as drinking 14 drinks or more in the past seven days.
** These percentages are based on small numbers and should be interpreted cautiously.
*** See Figure 1 for the definition of a drink.

Problems With Acting on Health Findings

Unlike other health risk behaviours (for example, smoking), many of the characteristics of heavy drinkers do not differ from those of non-heavy drinkers. Males, and possibly marital status, were the only two "risk factors" found here for heavy drinking (see Charts 1 and 2). Therefore, it is difficult to identify people who have a drinking problem, and people who are going to develop a drinking problem. As a result, strategies to reduce heavy drinking tend to be aimed at a very broad audience.

Chart 2. Characteristics of Heavy Drinkers* versus Non-Heavy Drinkers, Hamilton-Wentworth, 1989



* Heavy drinkers is defined as those consuming 14 drinks or more in the past 7 days.
**Low Income is based on the poverty line for 1989, and adjusts for family size (3).

What May Be Done to Reduce Heavy Drinking in Hamilton-Wentworth?

Several strategies are being investigated to reduce the number of people who abuse alcohol. These strategies include prevention, treatment and support services, and law enforcement. In addition to these services, family physicians can play an important role by increasing their patients' awareness of alcohol, as well as assisting in the detection and referral of people with alcohol problems to the appropriate community services (9).

- ***Prevention:***

The Hamilton-Wentworth Substance Abuse Community Action Group has recently been formed with the goal to promote non-use of illicit drugs and non-risk use of legal substances. Each November, Drug and Alcohol Awareness Week offers a variety of activities including workshops, exhibitions of treatment services, and presentations on select topics (for example, seniors and substance abuse). Many other projects and programs are also underway, ranging from local action groups to nation-wide organizations, with the common goal of reducing problem drinking (e.g PRIDE (People to Reduce Impaired Driving Everywhere), Addiction Research Foundation, drug and alcohol education in all three Hamilton Boards of Education).

- ***Treatment and Support Services***

Many treatment and support services are available to people who recognize their drinking problems, or for those who are trying to cope with a close friend or relative who has a drinking problem. A brochure that lists all detoxification, assessment, and treatment programs in Hamilton-Wentworth is available from the Hamilton Centre of the Addiction Research Foundation.

- ***Law Enforcement***

The RIDE (Reduce Impaired Driving Everywhere) programs held by police through holiday seasons have been successful in heightening awareness of the dangers of drinking and driving (10). Stiffer fines have also been set to deter people from drinking and driving (11). Another legislative option suggested has been to raise the legal drinking age to 21 years from its current 19 years.

Provincially, the Provincial Anti-Drug Strategy (12), the Substance Abuse Prevention component of the Ministry of Health Mandatory Public Health Programs and Services Guidelines (13), and the Addiction Research Foundation (14) share a common goal of reducing the burden of illness that alcohol fosters. The methods outlined in the Anti-Drug Strategy, and the need to measure and evaluate Substance Abuse programs as described in the Mandatory Health Programs Guidelines requires a cooperative approach among community, government and education agencies to reduce alcohol abuse.

Heavy Drinking and ...

People choose to drink alcohol for a number of reasons (e.g., pleasure, socializing, relaxation, escape). However, excess alcohol consumption can result in a variety of social and mental problems (for example, family, employment, legal, financial and interpersonal difficulties) as well as physical problems (for example, injuries at work, during sports, and from traffic injuries, alcoholic liver disease, inflammation of the pancreas, gastrointestinal illnesses, brain and nervous system problems, cardiovascular problems, and anemia (low blood)).

The characteristics of heavy drinkers, that is those consuming 14 drinks or more in the past seven days, is examined here for Hamilton-Wentworth citizens. The definition of one drink is shown in Figure 1.

... Marital Status

About 9% of Hamilton-Wentworth citizens who are married are estimated to be heavy drinkers (see Chart 2). This rises to nearly 15% of singles and 22% of citizens who are widowed, separated or divorced. In the case of separation and divorce, it is unknown whether this level of drinking was the cause of, or resulted from, the breakup of the marriage. The Addiction Research Foundation (3) reported that in 1985, 880 (1.4%) divorces granted in Canada listed alcohol-problems as the grounds.

... Education

The percentage of people drinking at least 14 drinks in the past week does not differ by level of education (see Chart 2). Between 12% and 13% of citizens surveyed at all levels of education report heavy drinking.

These results are somewhat different from other national surveys which have shown heavy drinking to be more common as educational level increases (5,6).

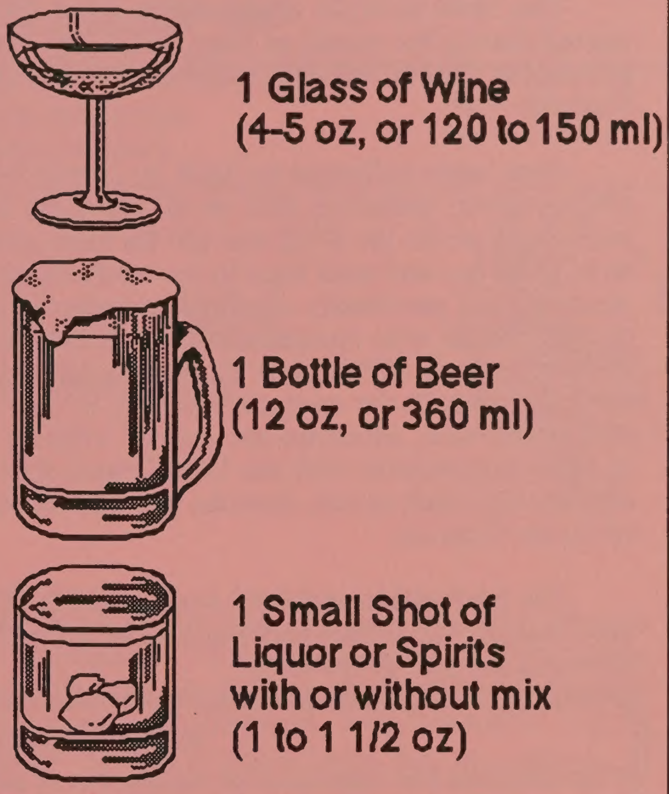
... Immigrant Status

The percentage of heavy drinkers is the same for people born in Canada as for those who have immigrated to this country (12%) (see Chart 2).

... Income

Overall, about the same percentage of heavy drinkers occurs among those living in low income households and those not living in low income households (12% and 11% respectively) (see Chart 2). Low income is based on 1989 poverty line estimates, and accounts for family size and the population size of the community (3,7).

Figure 1. 1 Drink is Equal to:


1 Glass of Wine
(4-5 oz, or 120 to 150 ml)
1 Bottle of Beer
(12 oz, or 360 ml)
1 Small Shot of Liquor or Spirits with or without mix
(1 to 1 1/2 oz)

These categories, however, may not be fine enough to see an association with income. For example, using more income groups, the 1985 Health Promotion Survey of Canada (5) found that the highest percent of heavy drinkers was among those in the middle and middle-high household income group. The lowest and the highest income groups reported the lowest percentage of heavy drinking in the 1985 survey. Unfortunately, due to differences in the two survey, comparisons were not possible.

... Self-Rated Health

Citizens who rate their health as “fair” or “poor” drink as heavily (14%) as those who rate their health to be “good” or “excellent” (12%) (see Chart 2).

How does Hamilton-Wentworth Compare to Other Areas?

About 12% of Hamilton-Wentworth residents are heavy drinkers. Between 8% and 12% of people have been reported to be heavy drinkers in other surveys in Canada (6), Ontario (6) and Québec (8). The much higher percentage of males reporting heavy drinking has also been consistently observed in all these surveys.

1989 Hamilton-Wentworth Health Survey - Methods

The 1989 H-WHS originated as a pre-test for the 1990 Ontario Health Survey (OHS) and was conducted during the month of May, 1989 (15). The goal of the OHS, and this pre-test was to gather baseline population data on the determinants of health and the physical, mental, and social health of the residents of Ontario.

Data were collected by both an interview (IAQ) and a self-administered questionnaire (SAQ). The IAQ involved gathering data on all members of a household from a single knowledgeable member of the household, while the SAQ was left for each member of the household who was at least 12 years of age and over to fill out and mail back to the study centre. Whenever possible, questions used in the survey were abstracted from previously administered surveys to ensure comparability. The sample of the H-WHS included 896 people who completed the IAQ (response rate = 86%), and 603 persons who completed the SAQ (response rate = 67%). Only those completing both questionnaires and who were 16 years of age and over were included in the analysis resulting in 571 subjects, with slightly over half being female (56%). With this sample size, estimates are correct within 3 to 4 percentage points, 95 times out of 100. A comparison of these respondents with the 1986 Census data for Hamilton-Wentworth residents revealed no differences on variables such as sex, income, and education. (H-WHS respondents were slightly older than that reported by the Census).

The preparation and field work of the H-WHS was funded by the Province of Ontario through the Ontario Ministry of Health and was conducted by Statistics Canada. See Chambers and Reynolds (3) for a full report on the survey methods.

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Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A Service of the Health Priorities Analysis Unit
To Inform People about Research on Health

March 1991
Volume 3, Number 1

You're Never Too Old...

(Healthy Aging in Hamilton-Wentworth)

What's This Issue About?

Views on aging differ depending on the culture and society in which we live. In North America, aging is often incorrectly thought of as a time for disability, disease and distress (1). In fact, only a small proportion of seniors are ill at any one time. Most seniors who become ill are only ill for a short time at the end of their lives (2). The majority of seniors are as healthy as their younger counterparts. This ***Infowatch*** reports on the results of the 1989 Hamilton-Wentworth Health Survey (H-WHS) which found that the majority of seniors in Hamilton-Wentworth are healthy too.

How Many Seniors Live at Home in Hamilton-Wentworth?

In 1989, there were about 56,680 persons who were 65 years of age and over (that is, seniors) living in Hamilton-Wentworth (3). This represents about 13.1% of the total population of Hamilton-Wentworth. About 50,000 or 93% of seniors lived at home (see Chart 1). About 4,200 live in long-term care facilities (4). About 2,500 of those living at home receive Home Care from the Hamilton-Wentworth Home Care Program at any one time (5).

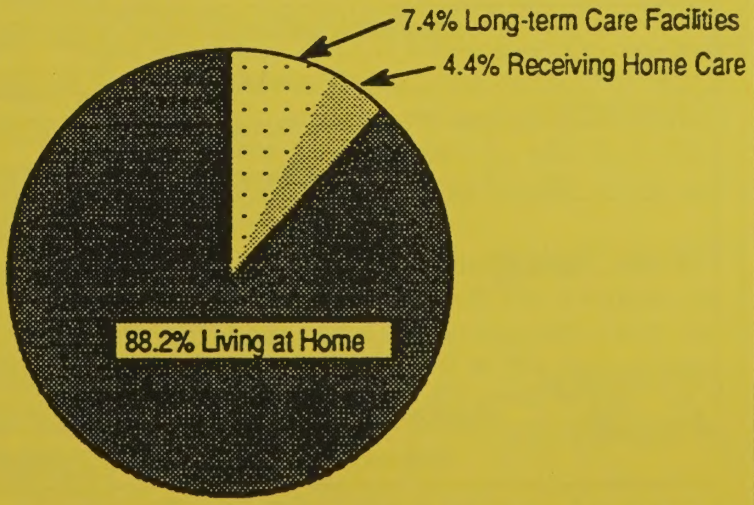
How Healthy are Our Seniors?

Using the H-WHS and focusing only on the 92.6% of seniors living at home, "health" was measured in a variety of ways:

- lifestyle factors such as smoking, alcohol, and physical activity;
- socioeconomic status;
- social support and satisfaction;
- self-rated health and well-being;
- physical health as related to chronic illnesses and medication use.

In order to look at how healthy seniors are in Hamilton-Wentworth, we look at the positive side of each of these characteristics, all of which have been shown to influence health (see Chart 2).

Chart 1. Estimated Percentage of Seniors Living at Home, Receiving Home Care, and Living in Long-term Care Facilities in Hamilton-Wentworth, 1989*.



*Estimated from population projections (3), results of the Health and Activity Limitation Suvey (4,5), and the number of Home Care clients (6).

Lifestyle

Alcohol

Nearly 92% of seniors reported drinking less than 14 drinks in the week prior to the H-WHS (see Chart 2).

Cigarette Smoking

About 91% of seniors reported to be non-smokers at the time of the survey (see Chart 2).

Physical Activity

Weekly physical activity (other than household chores) was reported by 70% of seniors (see Chart 2). Overall, walking and exercise at home were reported to be the most common forms of physical activity among seniors (84% of seniors walked and 40.1% exercised at home) (7).

$$$ *Wealth*

Income Level

55% of seniors are estimated to live above the poverty line (6,8). The 1989 poverty line estimate took into account both the size of the family, and the population size of the community. While this may seem low, for most seniors household income is limited to pension and interest incomes. Total assets (for example, total investments and owning their home) are not considered here in the poverty line estimate.

Own Home

Almost four out of five seniors live in their own home or in homes of their families (78%). Only 22% are renters.

Social Support

Contact with Friends and Relatives

About 92% of seniors said that they had visits with friends or relatives at least once a month (see Chart 2). Further, three out of every four seniors (75%) reported that this contact was at least weekly.

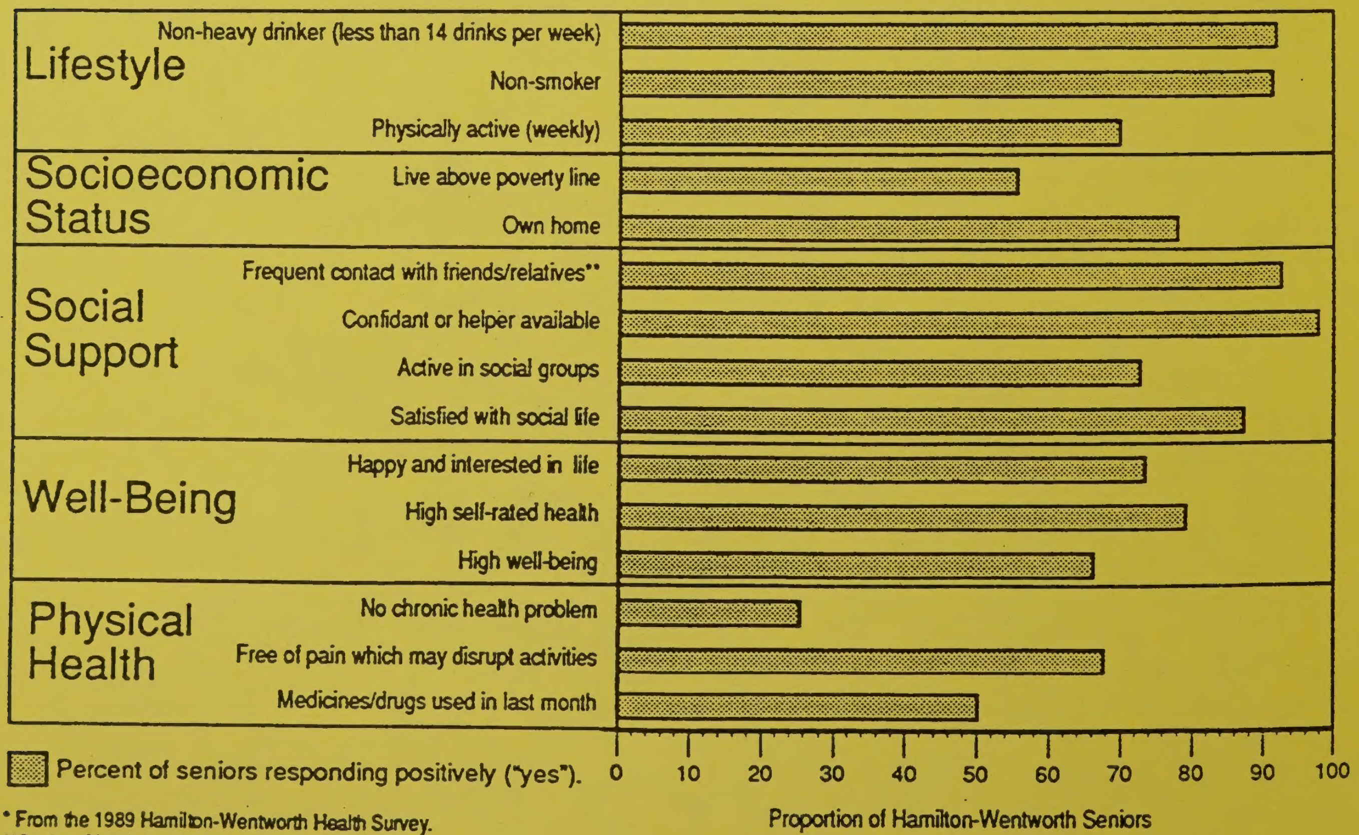
Confidant or Helper

Nearly all seniors (96%) said that they had a close friend or relative to whom they could confide in and talk freely about their problems. In addition, 92% of seniors reported that there was someone they could depend on to help them if it became necessary.

Social Groups

Three out of four seniors (73%) belonged to at least one of the following groups: social or recreational groups, a labour union, a commercial group or professional organization, religious groups, groups concerned with children, community service, chari-

Chart 2. Health of Seniors in Hamilton-Wentworth, 1989*



* From the 1989 Hamilton-Wentworth Health Survey.

**Seeing friends or relatives at least once a month.

ty or neighbourhood improvement groups, or groups concerned with the environment, human rights or peace.

Satisfaction with Social Life

High satisfaction with their social life was reported by 87% of seniors.

Well-Being

Happiness

Seventy-three percent of seniors said that they were extremely or generally happy with life as compared to 27% who said they were somewhat happy, generally unhappy or very unhappy with life.

Feeling Healthy

Almost four out of five seniors (79%) considered their health to be good or excellent given their age. This is particularly important because people's perception of how good their health is, has been found to be a good predictor of future illness and death (8-12).

Well-Being

An index developed to reflect well-being showed that 66% of seniors reported medium to high levels of well-being (13).

Physical Health

Chronic Conditions

No chronic health problems were reported by 25% of seniors. Chronic conditions here included at least one of the following: skin allergies, diseases, hay fever or other allergies, back pain, arthritis, rheumatism, joint or bone problems, paralysis or speech problems due to a stroke, asthma, emphysema, chronic bronchitis, persistent cough, epilepsy, high blood pressure, hypertension, heart disease, diabetes, urinary problems, kidney disease, stomach ulcer/other digestive problems, goitre, thyroid trouble, migraine, recurring headaches, or cancer.

Free of Pain which Interferes with Activities

Even though 75% of seniors may have a chronic condition, 73% of seniors are able to go about their activities without being disrupted with pain.

Medication Use

Half of seniors (50%) said that they had taken some kind of medicine or drug in the past 30 days including aspirin, pain relievers, tranquilizers, sleeping pills, stomach remedies or laxatives, antidepressants, codeine, demerol, morphine, allergy medications, cough or cold medicine, antibiotics, heart or high blood pressure pills. The most common medicines were aspirin and pain relievers (67%), or heart/high blood pressure pills (42%). Although medication, when used properly, can improve health, it is hoped that some day seniors can live both healthy and medication-free. Therefore, we present in Chart 2, the percentage of seniors who are medication-free (50%).

Let's Get a More Accurate Picture on Aging and Seniors

The results of the H-WHS, as with national surveys (for example, the 1978-1979 Canada Health Survey, 1985 Health Promotion Survey and the 1985 General Social Survey) show that most seniors are in good health mentally, physically, and socially. The goals of working with older people should include building on their capabilities, helping them to do things for themselves, and allowing them to achieve their full potential – goals which are common to all ages.

- In recognition of the very large proportion of seniors who are well, programs should be directed at these groups. For example, in Hamilton-Wentworth, social-recreation programs are available for seniors at Seniors Housing Centres and Clubs.
- Health promotion activities targeted at younger groups must be extended to older groups as well. For example, healthy lifestyle programs such as smoking cessation benefit people of all ages.
- More awareness about seniors should be a goal of education programs in both public schools and universities. For example, educating medical students about seniors has been shown to produce a positive effect on their attitudes towards seniors (14).
- Education and research programs must be established which focus on aging. For example, the Educational Centre for Aging and Health was created in 1987 at McMaster. The goals of the Centre are to increase the number of health professionals who are committed to providing excellent care for aging people, and to develop effective educational approaches for aging and health.

Many barriers to changing knowledge, attitudes and beliefs about aging still exist. For example, although the Human Rights Commission states that people cannot be discriminated on the basis of age, mandatory retirement at age 65 years is still law – even though Canadians are living longer today than they ever have before.

Lastly, although most seniors are quite healthy, we must not forget about the 6,700 seniors who are receiving health care daily in Hamilton-Wentworth.

1989 Hamilton-Wentworth Health Survey - Methods

The 1989 H-WHS originated as a pre-test for the 1990 Ontario Health Survey (OHS) and was conducted during the month of May, 1989 (15). The goal of the OHS, and this pre-test was to gather baseline population data on the determinants of health and the physical, mental, and social health of the residents of Ontario.

Data were collected by both an interview (IAQ) and a self-administered questionnaire (SAQ). The IAQ involved gathering data on all members of a household from a single knowledgeable member of the household, while the SAQ was left for each member of the household who was at least 12 years of age and over to fill out and mail back to the study centre. Whenever possible, questions used in the survey were abstracted from previously administered surveys to ensure comparability. The sample of the H-WHS included 896 people who completed the IAQ (response rate = 86%), and 603 persons who completed the SAQ (response rate = 67%). Only those completing both questionnaires and who were 15 years of age and over were included in the analysis resulting in 578 subjects, with slightly over half being female (56%). A comparison of these respondents with the 1986 Census data for Hamilton-Wentworth residents revealed no differences on variables such as sex, income, and education. (H-WHS respondents were slightly older than that reported by the Census).

For the analysis of seniors' health, 116 respondents who were 65 years of age and over were included (mean age 72 years). With this sample size, estimates are correct to within five percentage points, 95 times out of 100. Because questions on low income, the well-being index, heavy drinking and contact with friends were not answered by about 25% of respondents, estimates are correct to within 11 percentage points, 95 times out of 100.

The preparation and field work of the H-WHS was funded by the Province of Ontario through the Ontario Ministry of Health and was conducted by Statistics Canada. See Chambers and Reynolds (3) for a full report on the survey methods.

➡ Now Let's Hear From You ⬅

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The Health Priorities Analysis Unit is sponsored by the Educational Centre for Aging and Health which was established in 1987 with funding from the Ontario Government. Support is also received from the Faculty of Health Sciences, McMaster University, and the Hamilton-Wentworth Department of Public Health Services.

Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A Service of the Health Priorities Analysis Unit
To Inform People about Research on Health

June 1991
Volume 3, Number 2

Spot-light on Measles

in Hamilton-Wentworth

What's this issue about?

In the past few months, a number of Hamilton-Wentworth children and young adults have developed red measles. This increase has been called an "outbreak" by some people, and a possible "epidemic" by others. In this issue of **Infowatch**, we will look at measles, and use the example of measles to see how the Hamilton-Wentworth Department of Public Health Services monitors infectious diseases, and takes action to prevent outbreaks from becoming epidemics in this community .

What's happening in Hamilton-Wentworth?

In Hamilton-Wentworth, the current outbreak started in January, 1991. From January to June 1991, 112 people developed measles. Of these, 98 have been shown to be related to the current outbreak. Most cases have occurred in those 5-9 years, and 15-19 years of age (see Chart 1). The ages of those with measles, however, ranges from one to 31 years of age.

Who gets Measles?

As shown above, measles is most common among pre-school children, teenagers and young adults, especially those who have not been vaccinated against measles. Before a vaccine was developed, nine out of ten people would have had measles by age 20 years (1).

How do we get Measles?

Measles is caused by a virus. The virus spreads by droplet and direct contact with nose or throat fluids. It is one of the most easily spread infectious diseases (1). A person can spread the disease from just before the first symptoms occur until four days after the rash has appeared (1).

Chart 1. Outbreak of Measles from January 1, 1991 to June 1, 1991 in Hamilton-Wentworth: Number of people who developed measles in the outbreak by age-group.

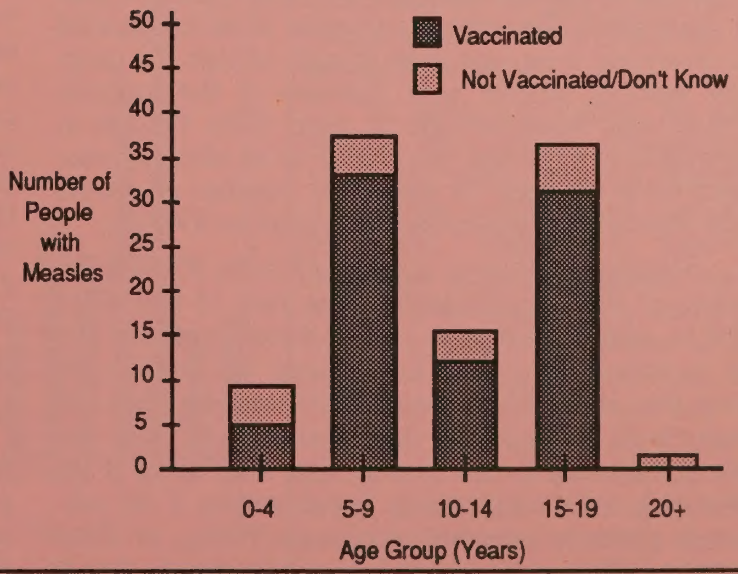
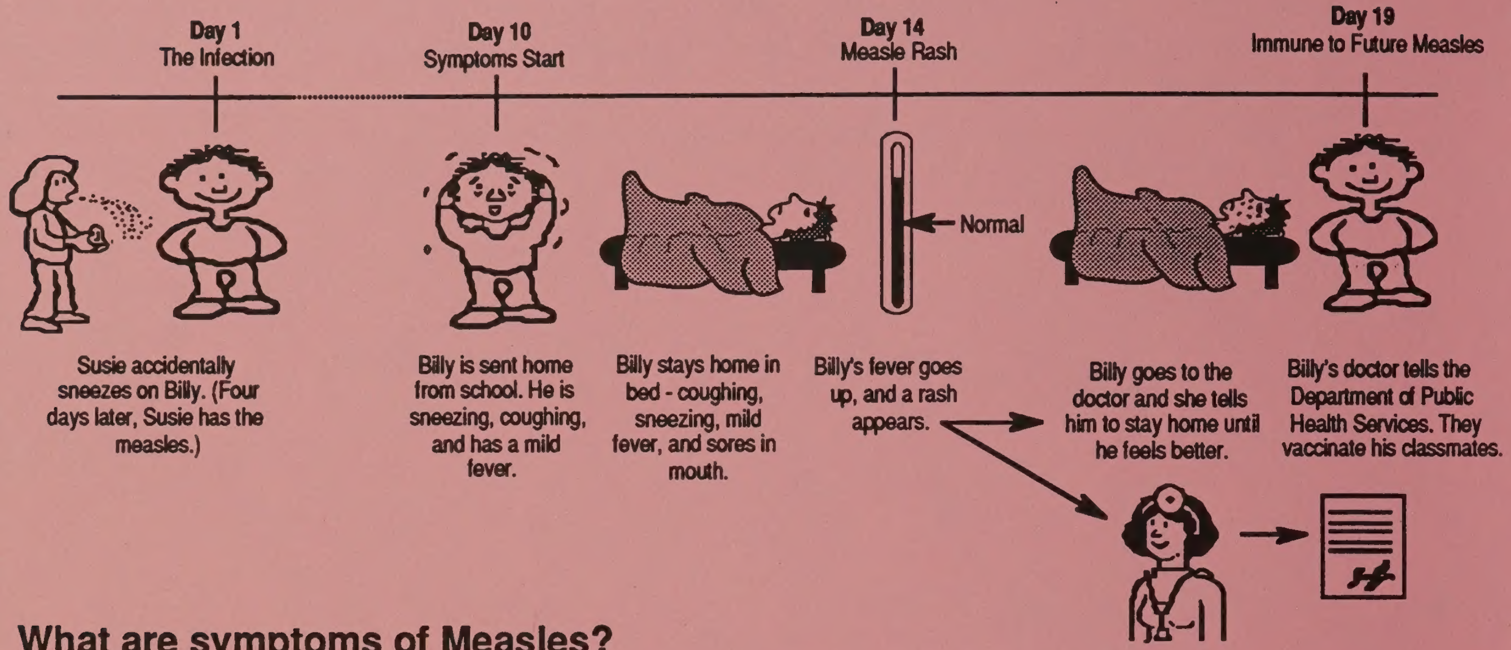


Figure 1. What Happens When You Get Measles?


Day 1
The Infection
Day 10
Symptoms Start
Day 14
Measle Rash
Day 19
Immune to Future Measles
Normal
Susie accidentally sneezes on Billy. (Four days later, Susie has the measles.)
Billy is sent home from school. He is sneezing, coughing, and has a mild fever.
Billy stays home in bed - coughing, sneezing, mild fever, and sores in mouth.
Billy's fever goes up, and a rash appears.
Billy goes to the doctor and she tells him to stay home until he feels better.
Billy's doctor tells the Department of Public Health Services. They vaccinate his classmates.

What are symptoms of Measles?

The first symptoms of measles are similar to those of the common cold: runny nose, red eyes, drowsiness, and loss of appetite. Over the next two days, a fever of about 38.3°-39.4°C (101°-103°F) would develop. On the third day, spots in the mouth appear, and coughing would begin. About the fourth day, the fever would rise and reach its highest point – sometimes as high as 40°-41.1°C (104°-106°F). When this happens, a red rash would break out (1). The rash appears first on the face and then extends to the rest of the body. The rash lasts about four to five days. As the rash goes away, the fever comes down. Figure 1 above shows how a typical bout of measles occurs.

How do we prevent Measles?

A vaccine to prevent measles has been used in Canada since 1963. The measles vaccine is recommended for everyone over one year of age, except for pregnant women, people with diseases of the immune system, and those allergic to eggs. (The vaccine is developed in eggs and could lead to an allergic reaction.) Over the past 30 years, the number of people with measles in Canada has decreased by 99% (1).

Measles vaccine is considered to be 95-98% effective in those vaccinated at one year of age (1,2). That is, almost everyone who is vaccinated will not get measles. They will be *immune* to measles. In some people (2-5%), however, the vaccine does not work well enough to cause immunity, and re-vaccination may be necessary. This may occur if the vaccine is not used properly. For example, if the vaccine is given to someone who is too young, or if the vaccine is improperly stored or administered, then it will not be effective in preventing measles.

In Hamilton-Wentworth, at least 83% of those who developed measles in the current outbreak had been previously vaccinated (see Chart 1). This high percentage points out two facts:

- most people have been vaccinated against measles;
- a large number of people got measles because the vaccine did not work. This large number, however, may simply be the 2-5% of people in whom the vaccine was not effective.

What is the risk involved with getting the Measles vaccination?

As with every medical procedure, there are risks involved with the vaccine. Compared to the benefits of a vaccination program, however, the risks are small. The risks of vaccination can include: mild pain from the needle, mild fever, some tiredness 5-12 days later, a mild cough, runny nose and spots in the mouth (1). In other words, a very mild form of measles may occur. Serious complications such as seizures and encephalitis (brain infections) are extremely rare (one in a million vaccinations) (2). Those who are vaccinated, however, greatly reduce their risk of developing measles and its associated complications.

What is the risk involved with getting Measles?

In contrast to the vaccine, the risk of serious complications (seizures and encephalitis) for people who develop with measles is much higher (one in a thousand people with measles) (2). Further, other complications such as pneumonia are not uncommon. Deaths from measles, while rare, have been reported. For example, in Québec, one person died out of 2,000 people who developed measles in a 1989 outbreak (3). Measles also disrupts care-givers who have to take care of those who have developed the illness; for example, one parent may have to stay at home when their children develop measles.

With respect to the cost to the health care system, the measles vaccination program has been shown to cost less than dealing with the burden of illness that would result from measles if no such program existed (2). In fact, if everyone was immunized, the measles virus could be eliminated. Yet, some people do not consider the risk of vaccination to be acceptable and refuse to have themselves and their families vaccinated. This allows the virus to continue to survive, thereby causing occasional outbreaks.

When is a disease an "epidemic"?

A disease epidemic is said to occur when a marked increase in the number of people developing the disease is observed. Monitoring infectious diseases is important to detect such increases. Doctors must report many infectious diseases, including measles, to local Health Departments. "Reportable Diseases" are shown in Table 1 (next page). When the Health Department is notified, they may contact the patient for further information (for example, if they know of any others with the illness), and take appropriate action (4). This information is computerized, monitored daily, and is kept strictly confidential by the Health Department.

When is measles an "outbreak"?

The current "outbreak" in Hamilton-Wentworth is not called an "epidemic" because of its relatively small size and ease of control. Chart 2 shows the "outbreak curve" for measles in Hamilton-Wentworth. An outbreak for measles is said to have occurred when at least two people with measles are "linked". "Linked" means that it is likely that one spread the illness to the other. For example, if one pre-schooler developed measles and two weeks later another pre-schooler in the same class developed measles, these two cases (that is, people with measles) would be considered linked, and an outbreak has occurred.

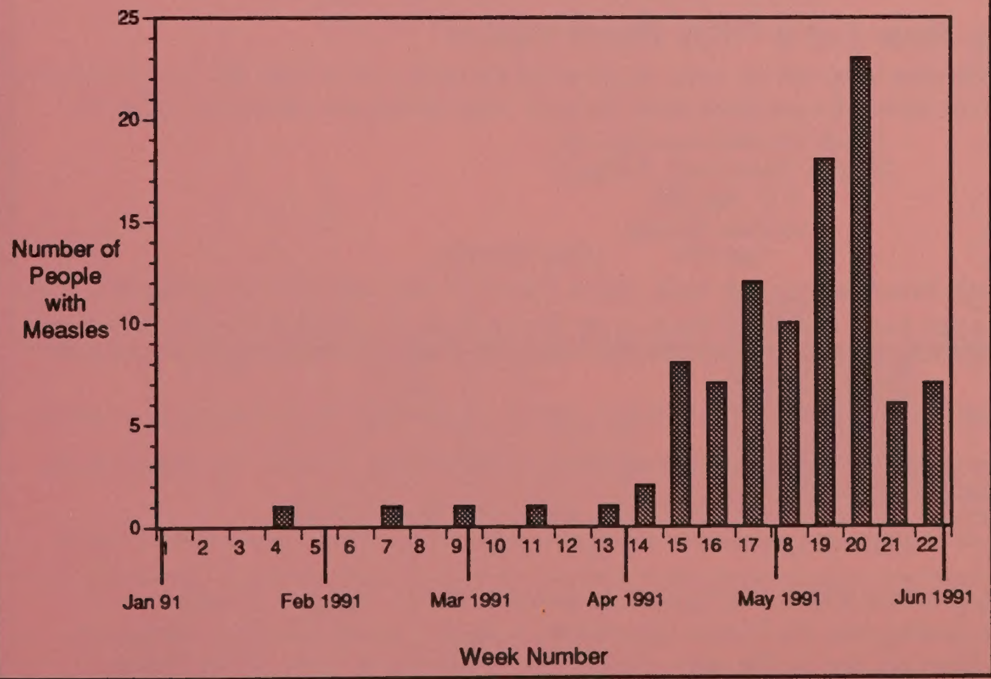
How are outbreaks controlled?

Depending on the disease, control of an outbreak can vary from treating people at risk for the disease to quarantining those with the disease. A child with measles is not allowed to attend school until five days after the rash disappears. In addition, all susceptible people are vaccinated. The number of people vaccinated can vary from a few members of the case's family to entire schools.

When is the "outbreak"over?

The outbreak is over when no more linked cases are reported. There is no way to predict accurately how many people will develop measles in this outbreak. With fast action from the Hamilton-Wentworth Department of Public Health Services, however, it is expected that the outbreak will be over soon.

Chart 2. Outbreak of Measles from January 1, 1991 to June 1, 1991 in Hamilton-Wentworth: Number of people who developed measles in the outbreak by week of onset.



Can we prevent future outbreaks?

Since not everyone in Hamilton-Wentworth can be vaccinated (owing to medical or religious reasons), and the vaccine is not 100% effective, occasional outbreaks of measles will occur.

In order to control the outbreak, the Health Department must have a sensitive and effective monitoring system which can lead to action. Vaccination requirements for school admission, computerized monitoring for outbreak detection, prompt response to reported outbreaks (for example, re-vaccination clinics) are a few of the tools that the Health Departments can use to combat an outbreak of measles. These and other safeguards should limit the current outbreak and serve to minimize future ones.

Is Hamilton-Wentworth the only area with an outbreak of Measles?

The other Health Departments in Central-West Region (which includes Hamilton-Wentworth), have also had outbreaks of measles. As of mid-June 1991, Niagara, Brant, Halton, Wellington-Dufferin-Guelph, Waterloo, and Haldimand-Norfolk were all experiencing measles outbreaks as follows:

	Earliest Case	Outbreak Over?	Number of Measles Cases to Date
Brant	January 1991	No	155 (to mid-June)
Haldimand-Norfolk	March 1991	No	83 (to mid-June)
Halton	March 1991	No	56 (to mid-June)
Hamilton-Wentworth	**January 1991**	**No**	**112 (to June)**
Niagara	October 1990	No	369 (to mid-June)
Waterloo	September 1990	No	1,059 (to late May)
Wellington-Dufferin-Guelph	October 1990	No	459 (to mid June)

All Health Departments report that the outbreak of measles in these areas is nearly over. The conclusion of this outbreak is also assisted by the end of the school year. That is, the summer holidays tend to lessen the opportunities for spread of the measles virus.

Table 1. Diseases which must be Reported to the Local Public Health Department in Ontario.

adverse vaccine events
AIDS/HIV
amebiases
rabies exposure
anthrax
atypical mycobacterial infections
botulism
brucellosis
campylobacter
chancroid
chickenpox
chlamydia
cholera
congenital cytomegalovirus
diptheria
E. coli (vertoxin)
encephalitis/meningitis
food poisoning
gastroenteritis-institution outbreaks
giardiasis
gonorrhea
haemophilius influenza type B
hemorrhagic fever
hepatitis A, B, Non-A Non-B (all viral)
herpes, neonatal
influenza
legionella
leprosy
listeriosis
lyme disease
malaria
measles
meningoccal meningitis and meningococcemia
mumps
paratyphoid fever
pertussis
plague
poliomyelitis
psittacosis
Q fever
rabies (human)
rubella and congenital rubella syndrome
salmonellosis
shigellosis
syphilis
tetanus
trichinosis
tuberculosis
tularemia
typhoid fever
yellow fever
yersiniosis

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Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A Service of the Health Priorities Analysis Unit
To Inform People about Research on Health

October, 1991
Volume 3, Number 3

Lights..Camera..(In)Action?

Active Living in Hamilton-Wentworth

What's this issue about?

Recent research emphasizes the importance of various forms of physical activity in the prevention of disease and in the promotion of good health. Therefore, an active lifestyle should receive increased attention both from health care professionals and from the public. In this issue, we use the results of the Hamilton-Wentworth Health Survey (HWHS) to look at physical activity levels among people in this community.

What is "active living"?

Active living is the inclusion of physical activity in your daily routine. The activity could be anything from washing the car, to walking the dog, to playing tennis, to running a marathon. An inactive lifestyle is a pattern of daily living which includes little or no physical activity either at work or during leisure time.

Why is "active living" an important health issue?

Studies in Europe and North America have shown that physical activity contributes to a decrease in the occurrence of heart disease (1-4).

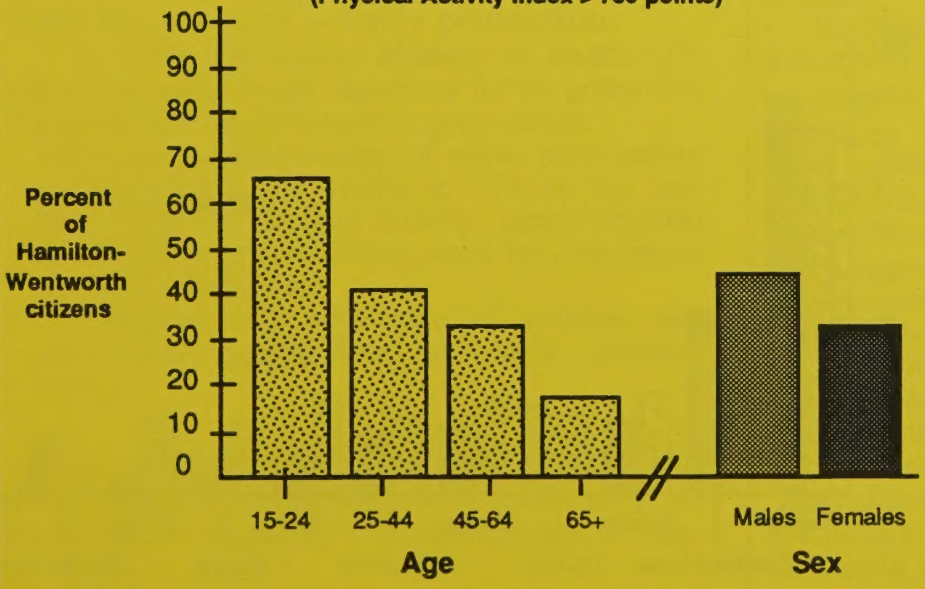
Circulatory disease (any disease involving the heart or the blood vessels) is the leading cause of death for men and women in Hamilton-Wentworth (5). It is the the contributing factor in one-third of all deaths in Canada (6).

In addition to keeping your heart healthy, active living is related to:

- improved mental outlook & life satisfaction;
- increased endurance and strength;
- maintenance of recommended-bodyweight;
- improved body composition (the ratio of fat to muscle);
- increased bone mineral retention (prevention of osteoporosis);
- decreased incidence of cancer;
- reduced absenteeism at work;
- decreased death rates from other causes (4, 7-12).

Chart 1: Percent of Hamilton-Wentworth citizens considered active, by age and by sex

(Physical Activity Index > 750 points)



How many people in Hamilton-Wentworth are "active"?

The answer to this question depends on how physical activity is measured. Measuring physical activity can take into account one or more of *frequency, duration* or *intensity* of the activity.

Frequency refers to the number of times (usually per week or month) that an activity is repeated. *Duration* refers to the length of time that each activity period lasts. *Intensity* refers to the amount of effort that the activity involves.

Using only *frequency* to measure physical activity, 63% (or 220,900) of the people in Hamilton-Wentworth report that they participate in physical activity three or more times a week, 17% (59,300 people) - one or two times a week, and 20% (69,800 people) are active less than once a week.

Using *frequency* and *duration,* as recommended by the Ontario Ministry of Health (14), only 15% of persons in Hamilton-Wentworth were “regularly active“ (three or more periods of activity a week for at least a 15 minute period). This means that about 85% (297,000 people) were found to be “inactive“.

The Physical Activity Index (13) uses *frequency, duration* and *intensity*, as well as *type of exercise,* to measure physical activity levels. The Index measures total energy output over a given period. The more activities a person does, the longer the activities last, and the harder a person works during the activities, the higher the score. For example, a person who plays baseball once a week for two hours gets a score of 480 points while a person who walks briskly for 40 minutes, 3 times per week, earns a score of 910.

Using the Physical Activity Index, 37% of Hamilton-Wentworh residents (130,000 people) have a score over 750 points per week, and are thus considered "active". Chart 1 shows the percentage of the population that is active in each age group when this standard is used. It is also used to explore the following relationships.

Active Living and...

..Age

People in the youngest age group are the most active. Three out of five of those aged 15 to 24 are active compared with one out of five (17%) over the age of 65.

...Sex

Men are more active than women. About 55% of men are active compared with 32% of women.

...Income

More people who have low incomes are inactive, compared with those who do not have low incomes (78% versus 60%). However, the survey only looked at leisure-time activity and not at activity at work.

...Education

Persons with higher education exercise more frequently. However, the Physical Activity Index is slightly higher for persons with 9 or fewer years of education.

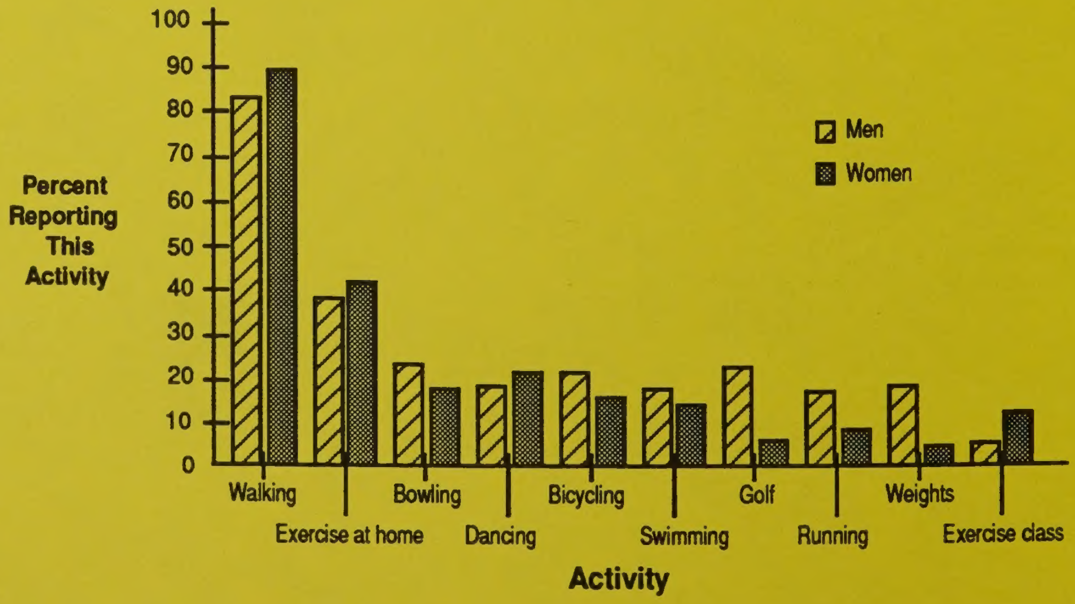
What activities do people in Hamilton-Wentworth do ?

The activity reported most frequently by both men and women is walking, followed by exercise at home. Chart 2 shows the ten most frequently reported physical activities for men and women in Hamilton-Wentworth. Since the survey was conducted in May 1989, results reflect spring or summer activities.

How does Hamilton-Wentworth compare with other communities?

There is little information on physical activity levels in other Canadian communities. However, two recent surveys provide information on the

Chart 2: Top ten physical activities of Hamilton-Wentworth men and women



activity levels in Ontario (11) and in Canada (12). The Hamilton-Wentworth survey revealed that 80% of the residents of this area were physically active at least once a week. Ontario residents and the average Canadian were less active (63% and 65%, respectively). Similarly, the percentage of residents who had medium to high scores on the Physical Activity Index (>750 points) was higher for Hamilton-Wentworth (37%) than for Ontario residents (27%) and Canadians (33%).

Seasonal variation in activities may partially explain the differences observed in these surveys.

From these comparisons, it appears that Hamilton-Wentworth residents are slightly more active than the average Ontario or Canadian resident.

How much activity is enough?

The exact amount and type of physical activity required to produce health benefits is hard to pinpoint. The Ontario Ministry of Health (14) recommends three to four periods of activity per week, for at least 15 minutes each time to gain health benefits. Studies have shown that low intensity activity (eg. walking), if undertaken regularly, provides many of the benefits of more intense physical activity (eg. running) (4,10). People are more likely to stick with an activity if it can easily be incorporated into a normal routine (eg. walking to work) and if a friend or relative also engages the activity (11).

Regular activity maintained over time is important. Switching to more appropriate activities as the seasons change (eg. cycling to skating) is better than stopping (11). Any increases in the amount or intensity of activities should be gradual. Most of all, to ensure that physical activity becomes a part of your lifestyle, it should be enjoyable!

Goals for physical activity promotion:

In 1989, the Ontario Ministry of Health (14) announced public health objectives for the promotion of physical activity in sedentary populations:

1. To increase the percentage of adults participating in regular physical activity to 75% by the year 2000. "Regular physical activity" means physical activity three or four times a week for a minimum period of 15 minutes
2. To increase the percentage of children and adolescents participating in daily physical activity.

It appears that we need to increase the participation levels of Hamilton-Wentworth residents if we are to achieve the goal of 75% participation in "regular physical activity".

What is Hamilton-Wentworth Doing to Promote Active Living?

The first step in increasing the activity levels of a population is to help people become more aware of the need to be active. *Participaction* with its "walk a block" promotion heightened the awareness of Canadians about the need for, and the benefits of, regular activity in the late 1970's and early 1980's. Over the past ten years there have been a number of initiatives in the Hamilton-Wentworth area which have tried to increase physical activity levels.

- The *Mac Turtles,* uses the combined expertise of several departments at McMaster University and Chedoke-McMaster Hospitals to provide an exercise rehabiliation program for recovering heart attack patients.
- The *Hamilton YMCA and YWCA* provide activity programs for special groups such as people who are *pre-natal, post-natal, overweight,* or *post-surgery.* Both organizations also provide a range of opportunities for those who work in the downtown core to be active before or after work or during lunch.
- Cities in the Region have *Recreation Departments* which offer a wide variety of low-cost activity programs for all ages. In addition, recreation department memberships permit participants to use any of the Departments' facilities at designated "open" times.
- The *Heart and Stroke Foundation,* which recognizes the importance of activity in the prevention of heart disease, runs a *Mall Walk* program. This program provides people of all ages the opportunity to get some exercise in a safe, dry, friendly environment on a regular basis, year-round. The malls that participate have been generous in their support of this initiative which has become a vibrant community effort.
- The Heart and Stroke Foundation has also joined forces with elementary schools to promote an activity program for children called "*Jump Rope for Heart*".
- In addition to these specific programs the *CLEAR (Culture, Leisure, Education, Arts and Recreation)* committee has been in existence for the past 10 years to promote activity levels in Hamilton-Wentworth. This group has representation from all public and private recreational groups (for example, the YW/YMCA, the Hamilton Recreation Department and the Hamilton Board of Education). It meets quarterly and hosts an annual conference to discuss strategies to make Hamilton-Wentworth "more active". This committee also plays a major role in such community activity events as the annual *Fit Day* in May and the *Terry Fox Run* in September.

1989 Hamilton-Wentworth Health Survey - Methods

The 1989 HWHS originated as a pre-test for the 1990 Ontario Health Survey (OHS) and was conducted during the month of May, 1989 (15). The goal of the OHS and of the pre-test was to gather baseline population data on the determinants of health and the physical, mental and social health of the residents of Ontario.

Data were collected by both an interview (IAQ) and a self-administered questionnaire (SAQ). The IAQ involved gathering data on all members of a household from a single knowledgeable member of the household, while the SAQ was left for each member of the household age 12 and over to fill out and mail back to the study centre. Whenever possible, questions used in the survey were abstracted from previously administered surveys to ensure comparability. The sample of the HWHS included 896 people who completed the IAQ (response rate = 86%) and 603 persons who completed the SAQ (response rate = 67%). Only those completing both questionnaires and who were at least 15 years old were included in the analysis. The analysis sample included 578 persons, with slightly over half being female (56%). With this sample size, estimates are correct within 3 to 4 percentage points, 95 times out of 100. A comparison of these respondents with the 1986 Census data for Hamilton-Wentworth residents revealed no differences on variables such as sex, income and education. HWHS respondents were slightly older than those in the Census.

The preparation and field work of the HWHS was funded by the Province of Ontario through the Ontario Ministry of Health, and was conducted by Statistics Canada. See Chambers and Reynolds (16) for a full report of the survey methods.

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The Health Priorities Analysis Unit is sponsored by the Educational Centre for Aging and Health which was established in 1987 with funding from the Ontario Government. Support is also received from the Faculty of Health Sciences, McMaster University, and the Hamilton-Wentworth Department of Public Health Services.

Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A Service of the Health Priorities Analysis Unit
To Inform People about Research on Health

July 1992
Volume 4, Number 1

A Series on Seniors

1. Seniors...who are they?

What's this "Series" about?

Over the past year, a special study has been conducted which has, among many things, led to the collection of health information on seniors in Hamilton-Wentworth (1). The data gathered for this study will be presented in this series. This is the first issue and provides an introduction to our seniors: who they are, their age, sex, ethnocultural background, socioeconomic characteristics, and more. Topics to follow will look at a broad definition of health and its determinants, and will include:

- illness burden
- social environment
- function and ability
- safe environments
- mental well-being
- illness prevention and health promotion

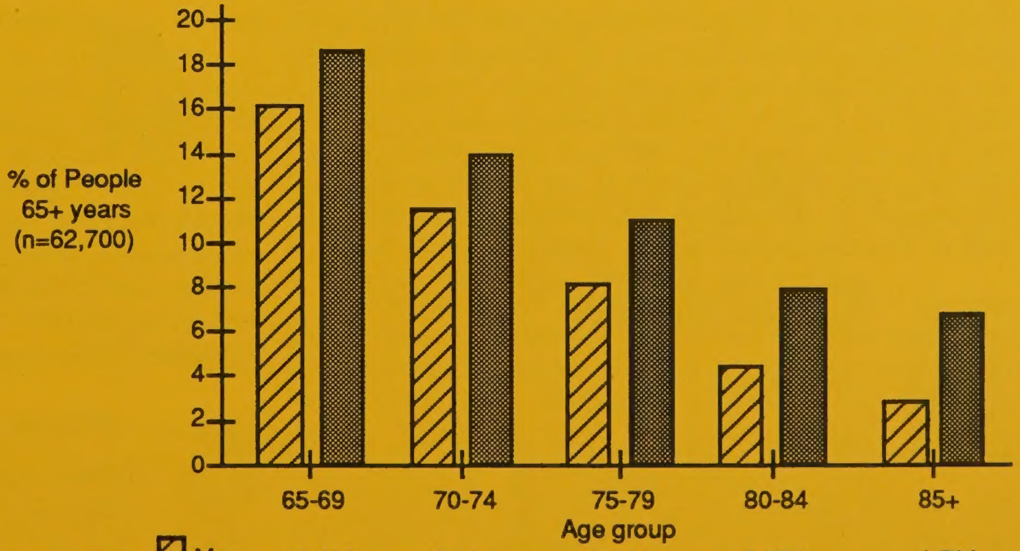
For those who can't wait and would like to read ahead, we suggest (and encourage) readers to directly obtain the sources of the information that we have used or will be using in this series. These can be found in the reference section on the back page.

How many seniors live in Hamilton-Wentworth?

In 1991, about 62,700 seniors, or those 65 years of age and over, lived in Hamilton-Wentworth. This represents 14% of the total population (2).

Chart 1 shows the number of men and women by age and sex, and how the percent of those over 65 years is distributed. Overall, more women than men comprise each age group, with women accounting for 59% of all seniors (see Chart 1).

Chart 1. Estimated Number of Men and Women, 65 years of age and over, in Hamilton-Wentworth in 1991



Numbers:		65-69	70-74	75-79	80-84	85+
	▨ Men	10,000	7,100	5,000	2,700	1,700
	▩ Women	11,600	8,700	6,800	4,900	4,200

Are Hamilton-Wentworth seniors culturally diverse?

• Ethnicity and Culture

Many elderly in Hamilton-Wentworth came to Canada as part of a wave of immigrants from countries in Eastern Europe during the 1920's and 1930's (3). Many of these immigrants worked in the steel industry and in construction, and tended to retain their former language and cultural identity. From the 1989 Hamilton-Wentworth Health Survey (HWHS), the ethnic groups for which seniors most often identified themselves as (excluding Canadian and British) included: Italian (5%), French (3%), Polish (3%) Ukrainian (2%), Dutch (2%), and German (2%) (HWHS unpublished data).

• Language

Even with such a diverse cultural community, 93% of seniors can speak English (4). It is not known, however, whether this represents total or partial fluency in English. Slightly more men can speak English than women (93.4% and 91.8%, respectively). Less than 1% of seniors speak French. About 1% reported Italian as the main language that was spoken at home (HWHS unpublished data).

What is the socioenomic status of Hamilton-Wentworth seniors?

• Income

Nearly 45% of seniors in Hamilton-Wentworth were found to have incomes below the poverty line (5). This indicator of socioeconomic status, however, is not as useful in describing the lifestyles of seniors as it is for younger people since it fails to include money that may be tied up in investments (for example, savings, home, property, stocks, bonds, etc.). Unfortunately, data on investments is not readily available for seniors in Hamilton-Wentworth. Other indicators of socioeconomic status, therefore, must be examined (for example, education, occupation, home ownership).

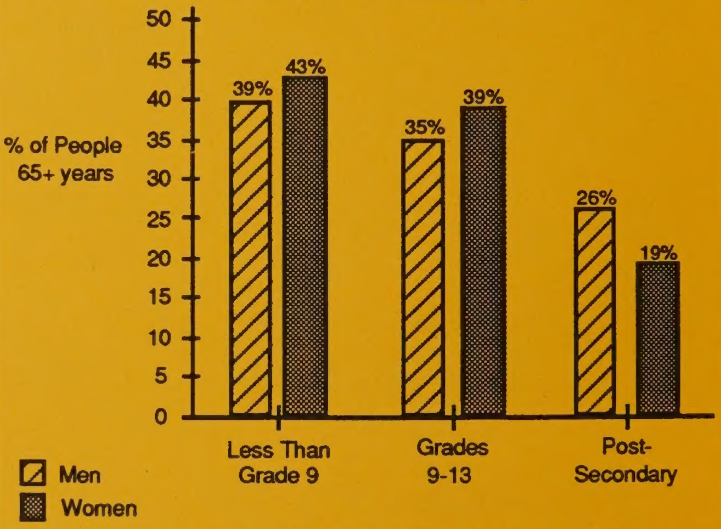
• Housing

Four out of five seniors (83%) own their own accommodation (5,6). Sixteen percent live in apartments, while 1% had other accommodations. From the 1988 Services for Seniors Study (6), most seniors (86%) were very happy with their present housing. Of those who were not happy, the most frequent reason was home disrepair. About 10% of seniors were considering a move in the next five years; the main reason being the inability to maintain (in terms of cost and upkeep) their current home (6). About 7% of seniors live in long-term care facilities (7).

• Education

According to the 1986 Census, 41% of seniors have less than a grade 9 education (4). In other words, 2 seniors out of every 5 have not passed grade 9. Women in this age group tend to have less formal education than males (see Chart 2); while 26% of men have some post-secondary education, only 19% of women do. Of all seniors in Hamilton-Wentworth, only 3% have a university degree.

Chart 2. Highest Education Level among Men and Women 65 years of age and over in Hamilton-Wentworth†



† Source: Region of Hamilton-Wentworth Selected 1986 Census Tables (4).

• Occupation

Unskilled labour occupations were reported as the main type of work for 32% of male seniors (6). This was followed by management (26%), skilled craft and trade (23%), and clerical, sales and service occupations (18%). Employment for female seniors was quite different: clerical, sales and service occupations (37%), homemaking (33%), management (12%), and unskilled labour (12.2%).

• Marital Status

About two-thirds (62%) of seniors are currently married, with 10% being single, and the remaining 29% being widowed, separated or divorced (HWHS unpublished data).

Other Characteristics About Hamilton-Wentworth Seniors ...

Previous issues of *Infowatch* have looked at cigarette smoking, alcohol use, and physicial activity patterns for Hamilton-Wentworth residents of all ages including seniors (8,9,10). The facts for seniors are summarized here and are based on the 1989 Hamilton-Wentworth Health Survey:

- ***Cigarette Smoking*** – 7% of seniors are daily cigarette smokers (8).
- ***Alcohol Consumption*** – 8% of seniors report consuming 14 or more drinks during the previous week (that is, before the survey) (9).
- ***Physical Activity*** – 83% of seniors include little or no physical activity in their daily lives (10).

What are the health implications for Hamilton-Wentworth?

Although seniors are often referred to as a collective group, the above outline shows that they comprise a diverse population. Consideration of this diversity must be made by physicians, health planners, and other health professionals. For example, language difficulties, as well as lower levels of education, may hamper communication between physicians and their senior patients. In fact, the Multi-Cultural Health Care Needs Study found that seniors of different ethnocultural backgrounds actively sought physicians of their own ethnic and linguistic group (3). Since about one in ten seniors cannot speak English, ideally about 10% of physicians in this community should be able to converse in at least two languages. The two languages most frequently in need are English and Italian.

The lower levels of formal education among seniors emphasizes the importance of presenting information at an appropriate level. Condescension, however, must be avoided. Advice on the use of prescription drugs, home safety, nutrition and physical activity, for example, should be provided in everyday language, without jargon. In addition, educational materials, when available, should be produced in different formats (for example, use of the media, videos, workshops), and different languages while also being sensitive to the diversity of ethnocultural backgrounds.

Several other problems have been identified (3) in meeting the health needs of seniors including:

- differences in cultural and behavioural values (for example, role of the family in elder care),
- the need for interpreters (uncomfortable for both the senior and health professional),
- accessible, and ethnospecific services,
- little knowledge of health services other than physician and hospital services (such as home care, public health nurse, foot care clinic, occupational/physiotherapy service, friendly visiting service).

What can and is being done in Hamilton-Wentworth ?

The 1990 Hamilton-Wentworth Multicultural Health Care Needs Study (3) produced recommendations to address the health care needs of seniors. Many of these recommendations can also be applied to address the broad view of health, that is, beyond health care. Some of these are listed below:

- develop culturally sensitive education materials specific to seniors and ethnic groups which can be shared.
- establish an interpreter's network specific to seniors based on language, culture and health care needs.
- facilitate research in specific areas pertaining to ethnic seniors.
- develop an inventory of health and social services that are ethnospecific and pertain to the elderly.

Currently, the Hamilton-Wentworth District Health Council is using these recommendations as the bases for developing implementation strategies. In addition, through public hearings and direct participation on committees, the District Health Council and Regional Advisory Committee on Services for Seniors (which reports to the Health and Social Services Committee) has increased senior participation in decision making and planning.

Another initiative in this community is the "St. Peter's Seniors' Comprehensive Health Organization (CHO) Project" (1). This project is examining the feasibility of developing a centrally coordinated, non-profit corporation to care for people 55 years of age and older in Hamilton-Wentworth. CHO staff would coordinate and monitor health care. For example, they would assist with arranging health care services including physicians, therapists, in-home services, nutrition counselling, cancer screening programs, and others, as well as participate in health promotion and disease prevention. The feasibility of this approach will be reported on later in 1992.

The Victorian Order of Nurses (VON) is currently reviewing methods whereby services can be offered in different languages. Health promotion services are offered by the Hamilton-Wentworth Department of Public Health Services to seniors at centres such as the Kirkendall-Strathcona Multicultural Centre, the Dante Centre, Hamilton Senior Citizens Centre, and the Golden Agers Centre. The Gerontology program at McMaster University is providing a course on Aging and Ethnicity which explores these issues further, and also seeks solutions.

Methods

This series of ***Infowatch*** was initiated in order to assemble the data collected for the St. Peter's Hospital Comprehensive Health Organization Feasibility Study (1) into a fact book on the health of seniors in Hamilton-Wentworth. We knew, however, from a survey of users of the 1988 Fact Book on the Health Status of Hamilton-Wentworth Residents (11) that about half of users preferred data in text format as opposed to the table/chart format of a fact book. In order to ensure that the information was as useful as possible, the ***Infowatch*** format was deemed the best way for presenting it concisely and comprehensively. The data contained herein, therefore, summarize a number of recent reports on Hamilton-Wentworth seniors. For those interested in specifics, we encourage the use of the references and resources provided.

Special thanks go to all of the organizations who have helped make this series possible. In particular, the following groups have made extensive contributions:

Educational Centre for Aging and Health
Hamilton-Wentworth District Health Council
Hamilton-Wentworth Department of Public Health Services
Social Planning and Research Council of Hamilton and District
McMaster University
St. Peter's Hospital
Victorian Order of Nurses Hamilton-Wentworth Branch

➡ Now Let's Hear From You ⬅

Your comments and suggestions are important to us and are being incorporated into publications from the Health Priorities Analysis Unit like this ***Infowatch***. Let us know what you think about this issue. Our address and telephone number are:

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Infowatch is a newsletter of the **Health Priorities Analysis Unit**, and is published when new data are available. It describes health and social data similar to that found in the *Fact Book on the Health Status of Hamilton-Wentworth Residents.*

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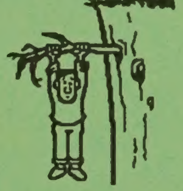
Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A Service of the Health Priorities Analysis Unit
To Inform People about Research on Health

August, 1992
Volume 5, Number 1

It Was an Accident ....or Was It?



Injuries in Hamilton-Wentworth

What's this issue about?

In Ontario in 1989, seniors (aged 65+) experienced higher rates of hospitalization and death due to injury than any other age group. For those under the age of 45, there were more deaths and days spent in hospital as a result of injury than for any other disease or condition. For the total population, injury was the fourth leading cause of death after cardiovascular disease, cancer and respiratory disease.

In the International Classification of Disease (ICD) Codes set by the World Health Organization injury is categorized both by "nature of injury", for example head injury, or fractures/dislocations, and by "cause of injury" which includes traffic collisions, falls, suicide, etc..

This issue will examine injuries in the Regional Municipality of Hamilton-Wentworth using data reported by the Ontario Ministry of Health .[2]

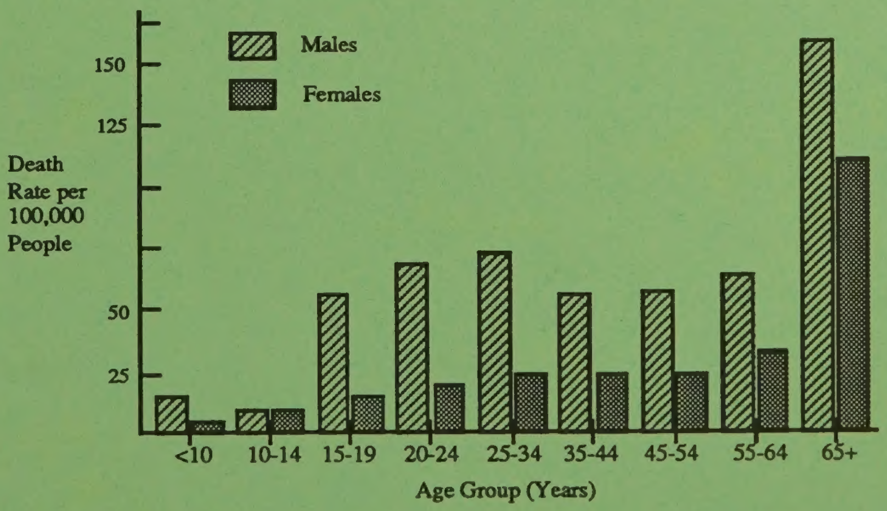
How serious is the injury problem in Hamilton-Wentworth?

In 1989, 188 people were killed and 6,356 people were hospitalized in Hamilton-Wentworth as a result of injury.[2] Chart 1 shows the death rate due to injury by age and sex for Hamilton-Wentworth. Injury was the leading cause of death for those under 45 years of age, and the fourth leading cause for all age groups combined in the Region from 1986 to 1989.

In addition, injuries accounted for 22.8% of all days spent in hospital in the Region in 1989. Only cardiovascular disease resulted in more hospital days (23.2%).

Similar to the Ontario statistics, seniors in the Region in 1989 had the highest rates of hospitalization and death due to injury.

Chart 1: Deaths Due to Injury in Hamilton -Wentworth by Age and by Sex (Average Annual Rates - 1986-1989)



Source: 1986-1989 Morbidity and Mortality Statistics, Ontario Ministry of Health, Information Systems Division, 1991.

Deaths Due to Injury

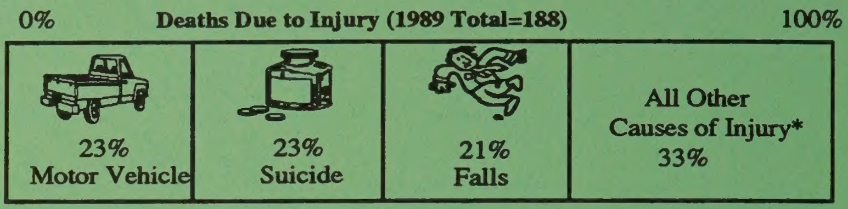
For all age groups in Hamilton-Wentworth, injury deaths were more often caused by motor vehicle crashes, falls and suicide than by other causes of injury (see Chart 2). Motor vehicle crashes were a major cause of death for every age group whereas deaths due to falls occurred more frequently in the 65+ year age group. In 1989, suicides were more common than motor vehicle deaths in all but the14-and-under age group in Hamilton-Wentworth.

Hospitalizations Due to Injury

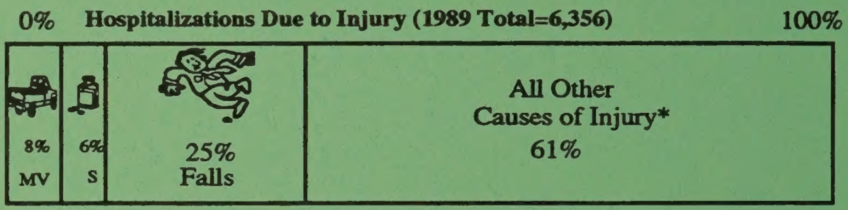
Falls resulted in more hospital admissions (measured by hospital discharges) than any other cause of injury in Hamilton-Wentworth in 1989 (see Chart 2). Motor vehicle collisions and attempted suicide were also major causes of injury requiring hospitalization. Falls (25%), attempted suicide (6%) and traffic crashes (8%) together accounted for about 40% of hospital discharges related to injuries.

Chart 2. 1989 Injury Deaths and Hospitalizations in Hamilton-Wentworth

A. Motor Vehicle Collisions, Suicides and Falls as a Percent of All Injury Deaths



B. Motor Vehicle Collisions, Attempted Suicides and Falls as a Percent of All Hospitalizations Due to Injuries



* Other causes of injury include: occupation, sports, off-road vehicles, burns, poisonings, drownings, homicides, injury to others.

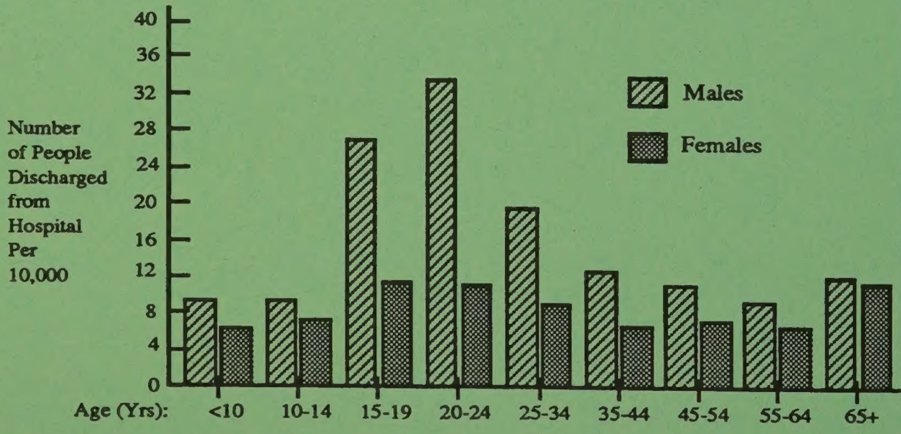
Source: Ontario Ministry of Health, Information Systems Division, 1991.

Who is injured ?

... in Motor Vehicle Collisions

In Hamilton-Wentworth in 1989, 43 people died and 507 people were hospitalized as a result of traffic crashes. These incidents resulted in 7,769 days spent in hospital. Chart 3 shows the rates of hospitalization by age and sex. Provincial statistics demonstrate a similar trend; in 1988 and 1989 in Ontario, 16-24 year-old males had the highest rates of traffic collisions and males were consistently involved in crashes two to three times more often than females.[3]

Chart 3. Hospitalizations Due to Motor Vehicle Traffic Injury by Age and by Sex in Hamilton-Wentworth - 1986-1989*



* Average annual rate

Source: 1986-1989 Morbidty and Mortality Report, Ontario Ministry of Health, Information Systems Division, 1991

... in Falls

Falls resulted in 51 deaths, 1,660 hospitalizations and 55,815 days spent in hospital in Hamilton-Wentworth in 1989. Chart 4 provides the average annual rates of hospitalization for falls by age and by sex in the Region. While falls remained the number one reason for hospitalization for all age groups, the problem was most severe in seniors. The 65+ year age group accounted for 44 or 86% of the deaths, 857 or 52% of the hospitalizations and 47,663 or 85% of the days spent in hospital related to falls in Hamilton-Wentworth. For each successive 10-year age group from age 55 on, there is a 50% increase in fall injury rates (not shown in Chart 4).

A comparison of 1986 to 1989 statistics for the Region[2] shows that the problem of falls in the 65+ year age group has grown in Hamilton-Wentworth over the past four years: number of deaths (25 in 1986 and 44 in 1989), number of hospital discharges (1,872 to 2,168), and the average length of time in the hospital (21 days to 53 days) all increased. The problem of falls in the elderly has also been identified as a priority area for the Province[4].

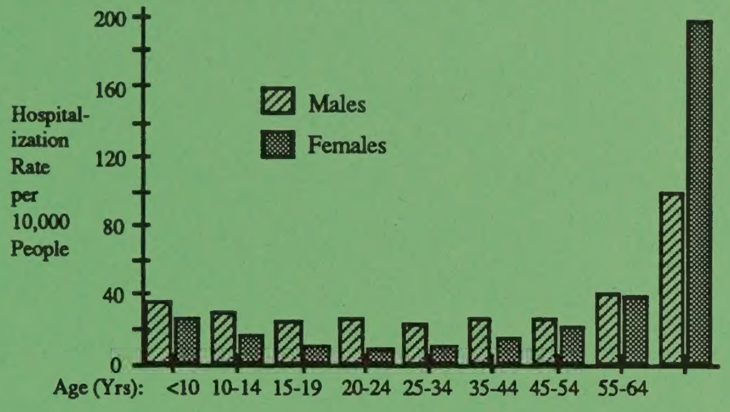


Chart 4. Hospitalization Rate Due to Falls by Age and by Sex in Hamilton-Wentworth - Average Annual Rate - 1986-1989

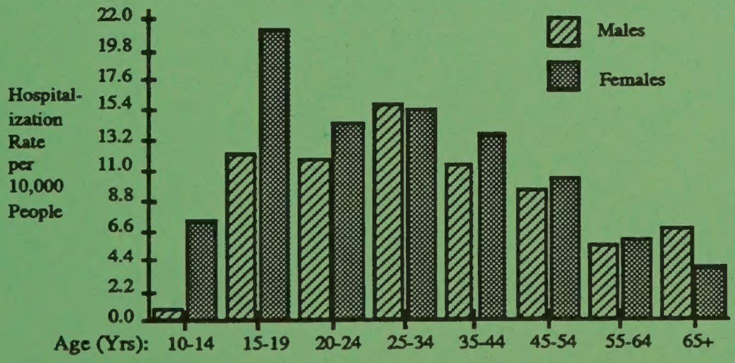
Source: 1986-1989 Morbidity and Mortality Statistics, Ontario Ministry of Health, Information Systems Division, 1991

... in Suicide

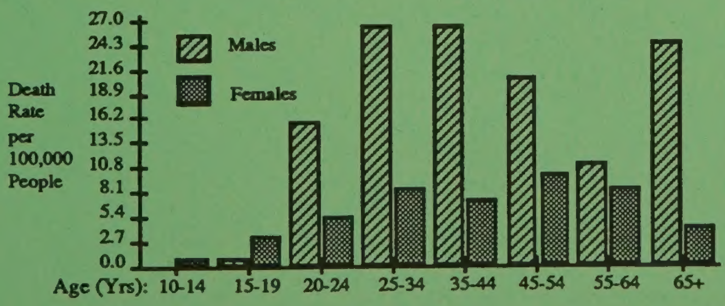
There were 36 suicides in Hamilton-Wentworth in 1989. There were also 399 attempted suicides, which resulted in 4,649 days spent in hospital in the Region. These high rates are particularly alarming since it is estimated that 12 to 17% of suicides are under-reported in Canada.[5]

Chart 5 gives the attempted and completed suicide rates for Hamilton-Wentworth by age and by sex. Males had higher rates of completed suicide whereas females had higher attempted suicide rates. Suicides were most frequent in 25-44 year-old males in Hamilton-Wentworth from 1986 to 1989 with 67 suicides representing 37% of the total suicides. During this time there were more suicide attempts (76) in 15-19 year old females than in any other group.

Chart 5. Suicide Rates for Hamilton-Wentworth - 1986 to 1989



A. Attempted Suicides by Age and by Sex - Average Annual Rates



B. Completed Suicides by Age and by Sex - Average Annual Rates

So What Can We Do?

The term "accident" is now considered a misnomer since it implies that these injuries are unavoidable. Research has demonstrated that more than 80% of all injuries are both predictable and preventable.[6-8] In many cases, a simple, inexpensive intervention could prevent a death or a lifetime of suffering.

Understanding the causes and identifying the risk factors are critical stepping stones toward injury prevention. The following factors are associated with the injury-producing incident and/or increase the likelihood of death or disability in the incident:

Motor Vehicle Collisions

- drinking alcohol and driving;
- not wearing seat belts (correctly);
- high speed;
- not wearing protective helmets (cyclists and motorcyclists);
- unsafe roadways for pedestrians, and;
- unsafe pedestrian behaviour. [3,9-11]

Falls

- not being physically active;
- weak muscles and joint stiffness;
- taking too many medications;
- chronic illnesses;
- unsafe homes;
- living in an institution;
- icy and snowy conditions;
- risk-taking behaviours, and;
- fear of falling. [12-18]

Suicides

- availablity of firearms;
- availability of lethal drugs;
- previous suicide attempt;
- depression & other psychiatric disorders;
- death of a friend, family member or peer;
- problems in personal relationships;
- alcoholism. [19-23]

Three types of intervention strategies are used in disease prevention. Listed from the least to the most effective[24], these are:

- education about risk factors and persuasion to modify behaviours;
- changes to existing laws or policies and to their enforcement, and;
- technical or engineering changes to provide a safer environment.

Several groups within Hamilton-Wentworth are employing a combination of strategies to address the injury problem in the Region. These include:

➪ The Hamilton-Wentworth *Council on Road Trauma* and the Region's *Pedestrian Safety Subcommittee*, are working towards traffic injury reduction.

➪ The Hamilton-Wentworth *Council on Suicide Prevention* has produced a manual *"A Handbook for the Caregiver on Suicide Prevention"*[19] and is active in presenting workshops on this topic.

➪ The St. Peter's Hospital *Falls Clinic* has recently been established to assess seniors who have experienced a serious fall.

Methods

Data related to hospitalizations and deaths due to injury were used for this issue of **Infowatch**. These data are reported annually by the Ontario Ministry of Health[1,2] for 10-year age groupings for the Regional Municipality of Hamilton-Wentworth. Since these data are also available for other regional municipalities, for geographic regions (eg., Central-West) and for the entire province, the opportunity exists for readers to compare Hamilton-Wentworth with these populations. Other injury data, such as emergency room visits or visits to other health professionals, are not collected annually and/or as comprehensively as hospital discharges, deaths, and days spent in hospital. Although injuries which require hospitalization only represent a small percentage of injuries (eg., 6% motor vehicle, 7% occupational, 2% sports and recreation[7]), these are the more severe injuries which place the greatest burden on our health care and social systems.[25]

The "cause of injury" E-codes, rather than the "type of injury" N-codes from the International Classification of Disease (ICD) were used in our analysis. Most injuries are recorded under both codes (e.g. a head injury (N-code) in a traffic crash (E-code)) and therefore use of both statistics would result in double counting. Since the E-codes better address the issue of causation, which is critical in addressing disease prevention strategies [26], these codes were considered the most appropriate data for **Infowatch**.

→ Now Let's Hear From You ←

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The Health Priorities Analysis Unit is sponsored by the Educational Centre for Aging and Health which was established in 1987 with funding from the Ontario Government. Support is also received from the Faculty of Health Sciences, McMaster University, and the Hamilton-Wentworth Department of Public Health Services.

Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A Service of the Health Priorities Analysis Unit
To Inform People about Research on Health

March, 1993
Volume 5, Number 2

A Series on Seniors

2. Seniors. . . their health problems in focus!

What's this issue about?

Physical, social, and psychological changes affect everyone from conception to death. As life expectancy has increased in Hamilton-Wentworth, most seniors (those aged 65 years and older) are living healthier, longer[1]. Even though most seniors are healthy[1], there are some seniors who experience poorer health and long term illness particularly near the end of their lives.

This Infowatch will examine the health problems of seniors in Hamilton-Wentworth based on the following indicators: hospitalizations, hospital days stay, health related service use & awareness, and self-reported health[2-9].

Why are seniors hospitalized?

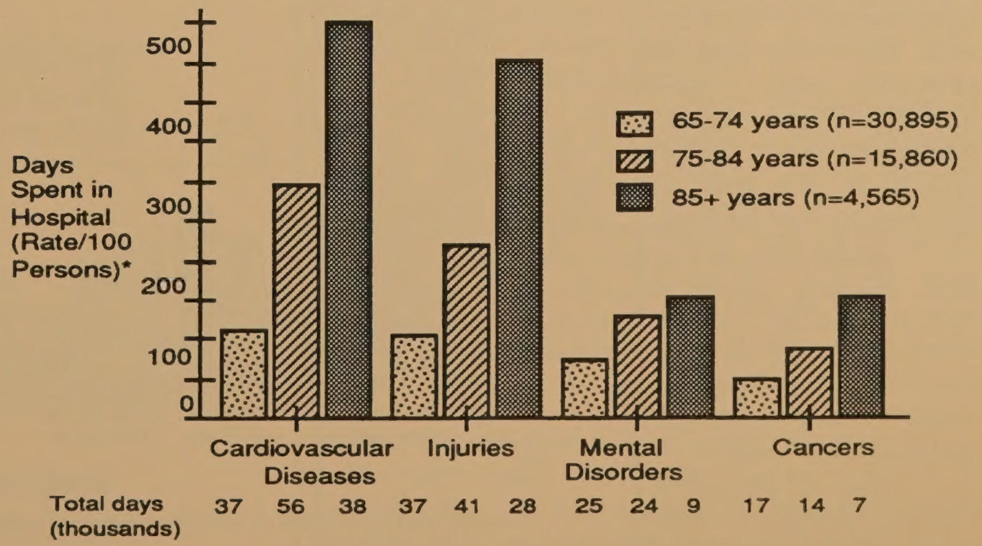
In 1989, seniors spent a total of 401,877 days in Hamilton-Wentworth hospitals. Circulatory disease (33%), injuries (26%), mental disorders (14%), cancer (10%), and respiratory disease (8%) contributed to 91% of all days spent in the hospital by seniors. This information indicates which conditions seniors will be dealing with when they return to their home environment after leaving the hospital.

Chart 1 shows the four major illness groupings which result in days spent in hospital for three age groups of seniors: 65-74 years, 75-84 years and 85 years and older[2].

Hospital stays per 100 patients increase with each successive ten-year age group for each of the four major illness categories. The magnitude of this age group increase is especially dramatic for circulatory disease and for injury.

Certain subcategories were more common than others within the four major illness groupings. Cancers of the trachea, bronchus and lung and prostate cancer were the most common cancers for men. Breast cancer resulted in the most hospital days for women.

Chart 1: Days Spent in Hospital due to Four Major Illness Categories by Age Group - Hamilton-Wentworth - 1989



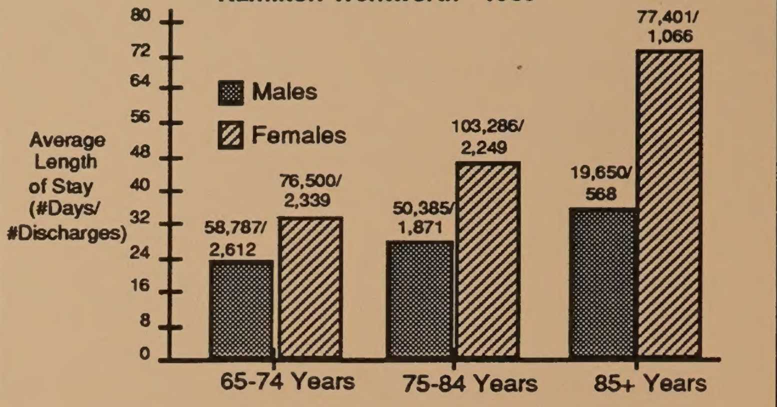
Source: Ontario Ministry of Health, Morbidity and Mortality Statistics, 1986-1989 (2)

Pneumonia accounted for 58% of hospital days due to respiratory disease. The most common subcategory of mental disorder was psychosis whereas the most frequent injuries resulting in a hospital stay were those resulting from a fall[2,8].

How long were seniors in the hospital?

Mental disorders and injuries had the highest average length of hospital stay (total # days/total # discharges) at 148 days and 49 days respectively. Chart 2 shows that the length of stay in hospital for seniors in Hamilton-Wentworth differs by age and by sex. That is, males had shorter hospital stays than females in each age group and the length of stay increased for each successive age grouping.

Chart 2: Average Length of Hospital Stay Due to Six Major Illness Categories by Age and Sex Hamilton-Wentworth - 1989



* Six main causes in order of average length of stay - mental disorders, injury, cardiovascular, respiratory, cancer, digestive

Source: Ontario Ministry of Health, Morbidity and Mortality Report, 1986-1989 (2)

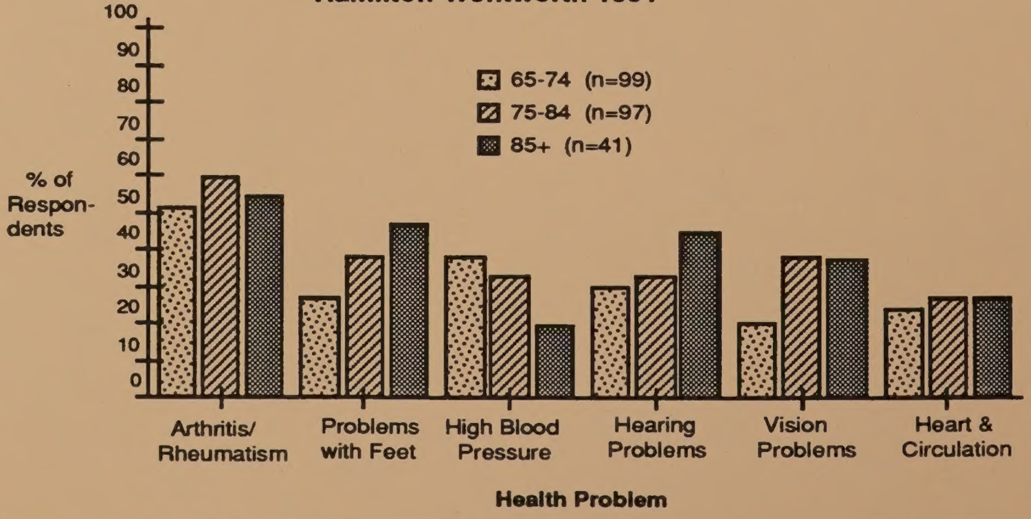
How healthy are seniors in the community?

According to the Hamilton-Wentworth results from the Canadian Study on Health and Aging (CSHA)[6], 84% of seniors (201/239), aged 65 years and older indicated that their health was either "very good" or "pretty good". Only 3.4% (8/239) indicated that their health was "poor" or "very poor". For seniors in the Ontario Health Survey (OHS)[7], 64% of men (56/87) and 72% of women (72/100) reported that they currently coped with two or more general health problems.

Chart 3 presents the six most common health problems as reported by three age groups of seniors in the CSHA study. Four of these - arthritis/rheumatism, trouble with their feet, hearing problems and vision problems - are chronic conditions which do not appear in the lists of major causes of death or hospitalization[2]. However all four of these have been cited as risk factors for falls in seniors which is a major cause of hospitalization and death for seniors[8].

Hearing problems and foot problems were more frequently reported by the 85+ year age group (44% and 46%, respectively) than by the 65-74 year age group (29% and 26%).

Chart 3: Top Six Self-Reported Health Problems of Seniors by Age Hamilton-Wentworth 1991



Source: Canadian Study of Health and Aging - McMaster Centre, 1991, unpublished data (6)

The study also reported that 12% of seniors had problems with memory. Additionally, a large number (76%) wore dentures, with 10% indicating that their dentures did not fit to their satisfaction.

How are seniors affected by their health problems?

Although many of the health problems of seniors in Hamilton-Wentworth are an inevitable outcome of the aging process, these problems hold important implications for the maintenance of independence. In particular, the ability to get around within the community, including driving a car, boarding a bus, and participating in social events, are affected by the most common health problems reported by seniors. About 16% of seniors in the CSHA reported that their health problems interfered "a great deal" with their normal activity, while 36% indicated that their problems hampered their activities "a little"[6]. In the OHS, 19% of seniors indicated that, compared with other people of the same age, they were limited in the kind or amount of activity they could do because of a long-term health problem[7]. As well, 59% of all seniors reported pain and discomfort which limited their activity[7].

It is important to prevent, or at least effectively manage, the health problems of seniors in Hamilton-Wentworth so that loss of independence is minimized and quality of life is enhanced. Knowledge of available community health-related resources, and access to them, is critical in dealing with these problems.

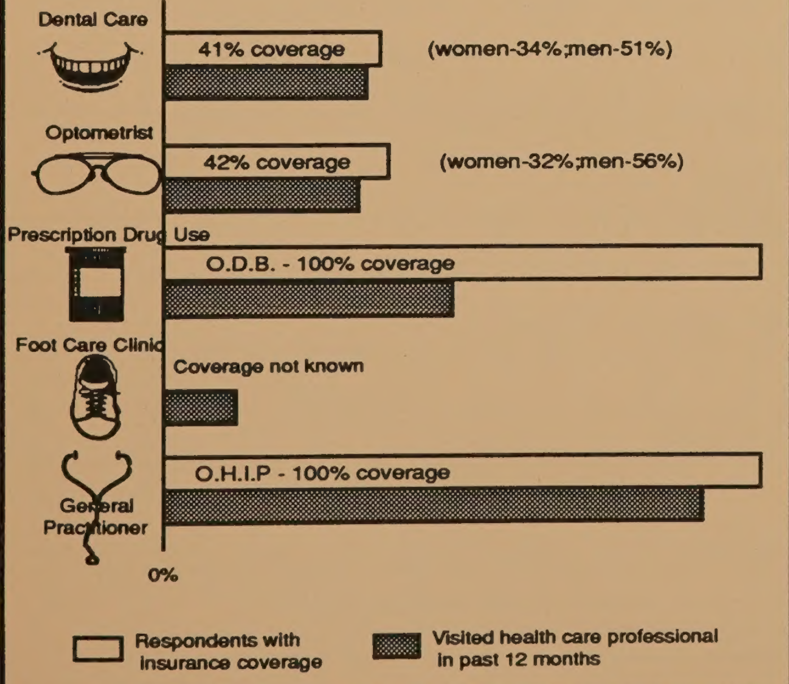
What are seniors doing about their health problems?

One way to examine this question is to look at seniors' access to, and awareness of, health related services in the Hamilton-Wentworth area. Chart 4 reports the percentage of seniors who visited selected health care professionals, as well as the percentage who had insurance coverage for that service[5,8].

The most frequently used services were health and medical services which included a family physician (90%), a medical specialist (43%), dental care (38%), and an optometrist (37%). Seniors reported visiting a pharmacist (11%) and a physiotherapist (6%) less frequently. Insurance coverage was low for dental care and glasses, especially for women. Seldom used services included: counselling (0%), phone health check (2%), nutritionist (2%), and a home health aid (3%)[4,7].

The proportion of seniors reporting prescription drug use (48%) is much lower than the percentage who report "frequent" drug use (69%). The most commonly used drugs among seniors in Hamilton-Wentworth are pain relievers (56%) and heart or blood pressure medication (42%). This use matches the most frequently reported health problems of seniors. The OHS also reported that 82% of seniors had had their blood pressure checked and 40% of senior women had had a breast exam in the past 12 months[7].

Chart 4: Health Professional Visits and Health Service Insurance Coverage of Seniors in Hamilton-Wentworth



Source: 1990 Ontario Health Survey; 1988 Hamilton-Wentworth Services for Seniors Survey

What is being done in Hamilton-Wentworth?

Many organizations are involved in health promotion and disease prevention initiatives for seniors. Some of these are described below:

- The *Hamilton-Wentworth Department of Public Health Services* is working to promote "healthy living with chronic disease" among seniors through the Salvation Army, various Seniors' Centres, and the YWCA. Programs include recreational and social activities, health counselling, and home support;
- Home Care is provided by the *Victorian Order of Nurses (VON)* and *St. Elizabeth Visiting Nurses* (health care) and by *Seniors for Seniors* and the *Visiting Homemakers Association* (housework, cooking & other chores);
- Foot care and dental care clinics are offered by the *VON, St. Peter's Hospital* (Hamilton) and *St. Joseph's Villa* (Dundas);
- The *Educational Centre for Aging and Health* (ECAH) at McMaster University has developed educational programs and resources related to the elderly for health care professionals. The Centre has compiled a listing of these resources[10];
- Several *Clinical Teaching Units* are sponsored by ECAH. These Units are located in health care facilities for seniors such as St. Peter's Hospital and Macassa Lodge. They provide students in the health care professions with the opportunity to learn about the health problems of seniors in a clinical setting;
- The *Heart & Stroke Foundation* sponsors Mall Walks at the Centre Mall and the Limeridge Mall in Hamilton. These walks are for all age groups, but a high proportion of the participants are seniors. These programs provide seniors with a dry, temperature-controlled, safe place to keep active and socialize;
- *St. Peter's Fall's Clinic* - this resource is offered to seniors who have a history of falls. A team of health professionals assesses each client and develops an individualized, fall prevention program.

Methods

Statistics on deaths, hospitalizations, and days spent in hospital at both the regional and provincial levels, were compiled from the 1991 Annual Hospital and Mortality Statistics which is provided annually by the Ontario Ministry of Health. There is a two-year time lag in this data such that the report used for this newsletter includes statistics for each year from 1986-1989. These data are provided to each of the 42 public health units in Ontario and include breakdowns by ten year age groupings as well as by gender.

The 1990 Ontario Health Survey (OHS) provides a health information on the residents of Hamilton-Wentworth. The OHS was a survey of a representative sample of those aged 12 years and older, and included 237 respondents who were over the age of 65.

Data related to service use and awareness were obtained from the Services for Seniors Study Report of Findings from the Survey of Seniors and Seniors' Workshops. This work was sponsored by the Hamilton-Wentworth District Health Council. Data were collected from 677 persons aged 55 years and over through a telephone survey. Participants were randomly selected from Hamilton and the surrounding municipalities of Ancaster, Dundas, Flamborough, Glanbrook and Stoney Creek.

The McMaster Centre data for the Canadian Study on Health and Aging (CSHA) were collected by personal interviews with a random selection of persons aged 65 years and over who were living at home or in long term care facilities in Hamilton-Wentworth. The survey included subjects in three age groups - 65-74 (99); 75-84 (97) and 85 years and older (41). The CSHA was designed to yield prevalence data related to Alzheimer's Disease and other dementias across Canada. Those who were initially screened as cognitively impaired, as well as a control group without impairment, were given a follow-up, extensive clinical examination. Caregivers of those with dementia and a control group were also interviewed. Full results of the CSHA and reports from the smaller regional studies will be available later in 1993.

➡ Now Let's Hear From You ⬅

Your comments and suggestions are important to us and are being incorporated into publications from the Health Priorities Analysis Unit like this ***Infowatch***. Let us know what you think about this issue. Our address and telelphone number are:

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Infowatch is a newsletter of the **Health Priorities Analysis Unit**, and is published when new data are available. It describes health and social data similar to that found in the *Fact Book on the Health Status of Hamilton-Wentworth Residents.*

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Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A Service of the Health Priorities Analysis Unit
To Inform People about Research on Health

March 1993
Volume 6, Number 1

You are what you eat ?

(Nutrition in Hamilton-Wentworth)

What's this issue about?

This issue uses the results of the 1990 Ontario Health Survey[1] to look at the nutritional habits of Hamilton-Wentworth residents. The recommendations of the 1992 Canada's Food Guide to Healthy Eating[2] are used to see whether Hamilton-Wentworth residents are eating a nutritious and well-balanced diet.

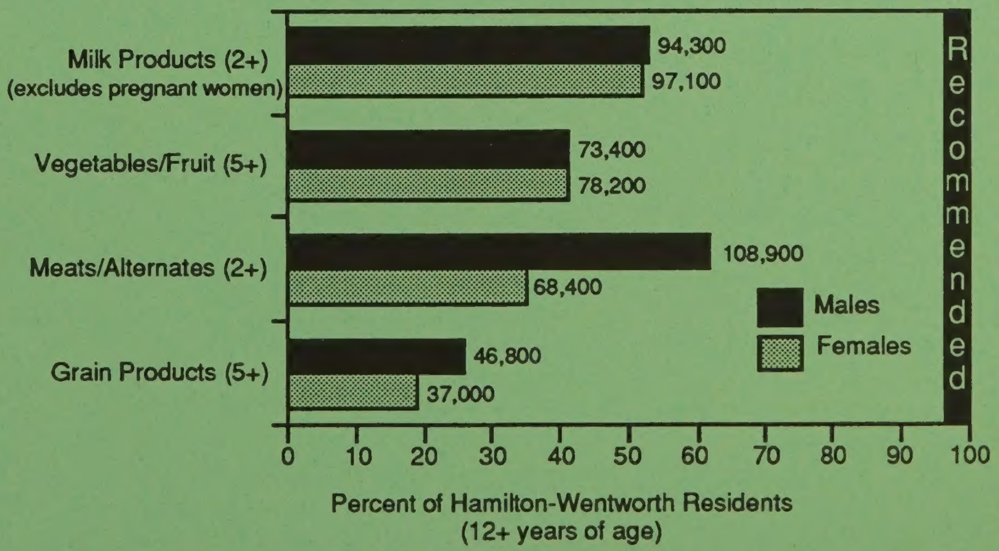
What do the people of Hamilton-Wentworth eat?

The 1992 Canada's Food Guide to Healthy Eating[2] outlines recommendations of what Canadians should eat in order to ensure adequate and proper nutrition. The Food Guide[2] recommends a range of daily servings for each of four major food groups:

- *2-4 milk products;*
- *5-10 vegetables and fruit;*
- *2-3 meat and alternatives;*
- *5-12 grain products;*

Chart 1 shows the proportion of Hamilton-Wentworth residents who meet the lower range of serving these recommendations. The data are based on responses to the 1990 Ontario Health Survey[1], among those 12 years of age and older. Since no upper limit to the number of servings was reported in the survey, the recommended number of servings used in this issue will refer to the minimum number of servings.

Chart 1. Percentage of Hamilton-Wentworth residents (12+ years of age) consuming recommended number of each food group, 1990*.



* Approximately 9% of respondents did not answer the nutrition questionnaire. See Page 4 for details.
Source: 1990 Ontario Health Survey, Hamilton-Wentworth Regional Report (1).

The Four Food Groups:

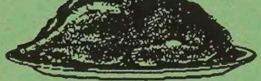
1. Milk and Milk Products

Consuming at least 2 servings of milk or milk products was nearly equal between the sexes with about 53% of men and 52% of women meeting this recommendation (Chart 1). Pregnant women were excluded in this analysis because of their higher nutritional needs with respect to milk products. Adolescents aged 10-16 years also have a higher recommended number of servings of milk products (3-4 servings). The survey found that 53% of youths 12-19 (the age group in the survey) consumed 3+ servings.

2.Fruits and Vegetables

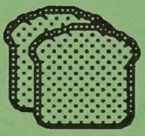
The recommended 5+ servings of fruits and vegetables were consumed by 56% of men and 54% of women (Chart 1).

3. Meats and Alternatives



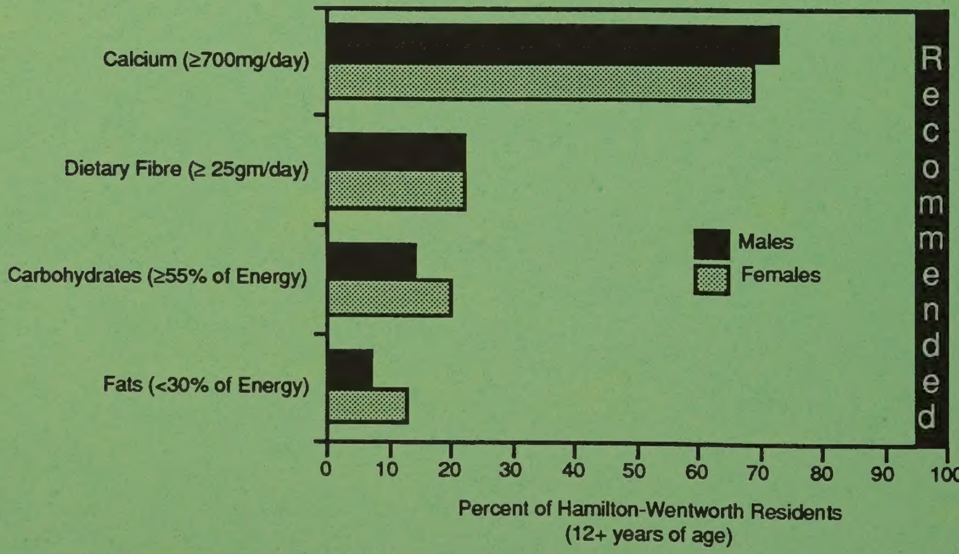
Men reported eating the recommended 2+ servings of meats or alternatives much more often than did women; 62% of men compared to 35% of women (Chart 1).

4. Grain Products



The recommendation for grain products was not well met; 26% of men and 19% of women consumed the recommended 5+ servings of grain products per day (Chart 1).

Chart 2. Percentage of Hamilton-Wentworth residents (12+ years of age) consuming recommended amounts of fats, carbohydrates, fibre, and calcium, 1990*.



* Approximately 9% of respondents did not answer the nutrition questionnaire.
Source: 1990 Ontario Health Survey, Hamilton-Wentworth Regional Report (1).

Some Essential Nutrients:

1. Fats

Fats are a source of energy for the body. However, because of the association of high fat diets with many health problems such as heart disease, obesity, diabetes, some cancers, no more than 30% of food energy should come from fats[3,4]. Fats are high in foods such as fried foods, salad dressings, pastries, cream, and potato chips.

Most residents of Hamilton-Wentworth reported consuming high fat diets (Chart 2); only 7% of men and 13% of women reported consuming the recommended 30% or less of their daily energy from fat.

2. Carbohydrates

Carbohydrates should be the major source of energy comprising at least 55% of energy intake[4]. Only 14% of men and 20% of women, reported meeting this recommendation (Chart 2). Foods high in carbohydrates are found mainly in grain products (bread, pasta, and rice), as well as vegetables and fruits (vegetables, dried beans and peas, apples).

3. Dietary Fibre...

Fibre is important for maintaining good bowel function as well as for reducing the risk of developing cancer of the bowel[5]. While a recommendation for daily dietary fibre is not yet available, fibre is recognized as an important part of a complete diet[1,4]. About one in five people (22%) reported consuming a relatively high fibre diet (that is, at least 25 gm per day) (Chart 2). Dietary fibre can be found in foods such as grain products (whole grain breads, cereals, and rice), and vegetables and fruits (dried beans and peas, apples, potatoes with skin, dried fruits). Note that foods high in fiber are often high in carbohydrates.

4. Calcium

Calcium is important for the growth and maintenance of strong bones and teeth[6]. It is also necessary for many metabolic processes in the body such as blood clotting, hormone function, and muscle movement[4,6]. About 7 out of 10 men and women reported consuming an adequate amount of calcium in their diet, that is, at least 700 mg per day (Chart 2). Recommended daily calcium, however, is known to change with age, and the needs of women may be higher after age 50 years[4]. This recommendation, therefore, may not meet everyone's needs. Calcium can be found in dairy products, green leafy vegetables, and dried beans.

Why a Food Guide?

The 1992 Canada's Food Guide to Healthy Eating was developed over several years and encompassed reviews of the nutrition literature, nutrition expert consultations, and focus group testing[2]. The goal of the Food Guide is to advise and educate people about making wise food choices. This includes providing recommendations aimed at reducing the risk of heart disease, certain cancers, osteoporosis, obesity, as well as conditions which result from nutrient deficiency or excess. The Guide is also used by institutions and agencies as a reference standard for food services. In addition, the Guide can be used by individuals to assess the adequacy of their diet.

Rather than being restrictive, the Food Guide emphasizes *variety*. The guidelines provide the following advice to help people make healthy choices with respect to eating:

- choose more cereals, breads, other grains, vegetables and fruits;
- choose lower-fat dairy products, leaner meats, and foods prepared with little or no fat;
- achieve and maintain a healthy body weight by enjoying regular physical activity and healthy eating;
- limit the use of salt, alcohol and caffeine.

What does this mean to Hamilton-Wentworth?

In Hamilton-Wentworth, the information from the 1990 Ontario Health Survey shows that the 1992 Canada's Food Guide to Healthy Eating[2] is not well followed. Many residents of Hamilton-Wentworth fail to meet the recommendations, particularly for servings of grain products. An emphasis on the importance of grain products, as well as fruits and vegetables should be encouraged.

A second major area of concern is the high proportion of people who eat high fat diets. Consuming energy (or "calories") from fat is likely at the expense of consuming energy from carbohydrates. Shifting to the consumption of foods high in carbohydrates has the advantage of supplying other essential nutrients in addition to energy.

With respect to the other guidelines in the food guide, body weight, physical activity and nutrition are recognized as important determinants of health, and will be the subject of a future ***Infowatch***. No information was available in this survey on salt and caffeine use. Alcohol use in Hamilton-Wentworth has been a topic of a previous issue[7].

Changes in the nutrition habits of Hamilton-Wentworth residents should be encouraged to move towards improved food choices which should ultimately improve health.

What is Hamilton-Wentworth doing to address this problem?

In order to address the problems raised above, the Nutrition Division of the Hamilton-Wentworth Department of Public Health Services has initiated a number of activities to increase awareness of healthy eating, and to develop environments that encourage healthy food choices. These activities consider individuals and populations with the aim to improve the health of the community through better nutrition. A few of the activities are described:

1. Approaches aimed at individuals

- Supermarket Safari: a supermarket-based nutrition education program to improve individuals' food purchasing skills;
- classes to develop skills in food preparation for specific individuals and groups;
- programs which make nutrition information and advice available to workers, pregnant women in prenatal classes, and teenage girls who have unhealthy body images.

2. Approaches aimed at populations

- consult and collaborate with the media;
- participate on the Greater Hamilton Food Share, Food and Shelter Advisory Committee, and Promise the Children 2000 to establish policies and programs that enable individuals and families to obtain sufficient food;
- collaborate with Boards of Education to develop curricula on healthy eating, healthy weights, positive body image, and enjoyable physical activity (children and adolescents). Also, support the implementation of the School Food Policy for the Hamilton Board of Education;
- consult, provide workshops and distribute nutrition information to the public, professionals, agencies, groups, and students in health, education, social services and recreation;
- consult on food policies, guidelines and standards for various settings such as day cares, schools, lodging homes, workplaces.

In addition to these activities, other community agencies also distribute nutrition information, particularly agencies which seek to prevent diseases such as heart disease, cancer, osteoporosis, and others[4].

Methods

The 1990 Ontario Health Survey (OHS) was conducted by the Ontario Ministry of Health to gather information on the determinants of health among residents of Ontario[1]. These data have been made available at the local level through provision to local Health Departments and District Health Councils. Data were collected by both interview and self-administered questionnaires. The interview involved gathering data on all members of a household from a single knowledgeable member of the household. The self-administered questionnaire was left for each member of the household aged 12+ years and was picked up later by the interviewer. In Hamilton-Wentworth, information from both questionnaires was obtained on 1,340 people, a response rate of 74%. Detailed methodological information is given in the OHS documentation[1]. With this sample size, estimates in this issue of **Infowatch** are within 5 percentage points, 95 times out of 100.

Nutrition: The OHS used a food frequency questionnaire to measure nutrition, recognizing the limitations of such an approach[1]. Although assumptions are required to estimate the amounts of nutrients from such categorical data, the advantages of this format included ease of completion and relatively low cost and were thought to outweigh the limitations[1]. While the Food Guide recommends a limit to the number of servings, the published OHS data did not report upper limits. In addition, while the data presented here were tabulated based on the 1992 Food Guide Recommendations, the survey was conducted when an older version of the Food Guide was in use which recommended fewer servings of grain products (3+), and fruits and vegetables (4+). Differences between the two versions also exist in serving size. At present, no data are available to assess the impact of these problems on the data. By presenting these data in broad classifications, small inaccuracies should be minimized.

Overall, approximately 9% of people did not answer questions in the nutrition section of the questionnaire. The percentages shown in the charts are based on the total sample.

➔ Now Let's Hear From You ⬅

Your comments and suggestions are important to us and are being incorporated into publications from the Health Priorities Analysis Unit like this **Infowatch**. Let us know what you think about this issue. Our address and telelphone number are:

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Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A Service of the Health Priorities Analysis Unit
To Inform People about Research on Health

August, 1993
Volume 6, Number 2

A Healthy Balance!

Weights and Physical Activity Patterns in Hamilton-Wentworth

(Adults aged 20-64 years)

What's this issue about?

A previous issue of Infowatch[1] outlined Canada's recently revised National Guidelines to Healthy Eating. One of these guidelines advises Canadians to "maintain a healthy body weight through healthy eating and regular physical activity"[2]. Body weights that are outside a defined "healthy weight zone"[3] have been linked to several health problems including cardiovascular disease which is the leading cause of death and hospitalization in Hamilton-Wentworth[3-5]. Appropriate physical activity is important for achieving and maintaining a healthy weight and it also reduces the risk of health problems such as cardiovascular disease, respiratory disease, osteoporosis and diabetes[6-8]. This issue of Infowatch looks at body weights and physical activity patterns in Hamilton-Wentworth using the results from the 1990 Ontario Health Survey[9].

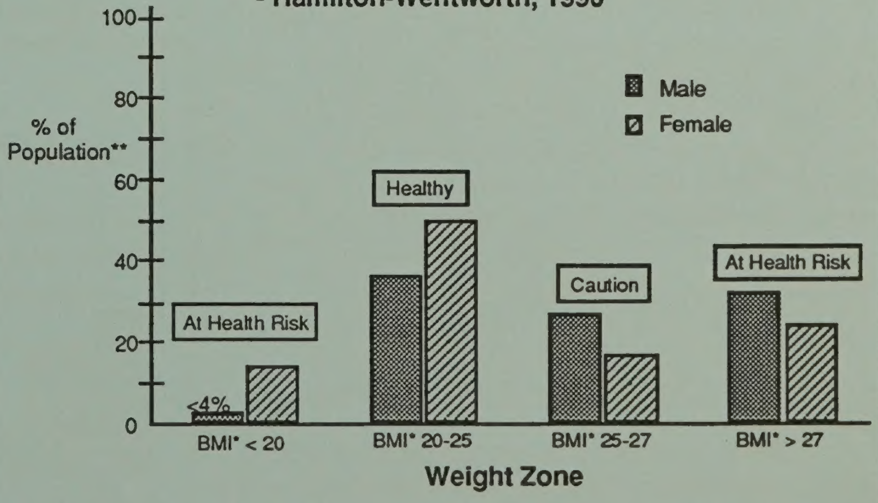
What is a healthy weight?

A healthy weight is a combination of strong, healthy bones, adequate muscle development, and low to moderate levels of body fat. Healthy weight is unique to each individual since the relative proportion of bone, muscle and fat are partially determined by heredity[10].

One way to assess healthy weight in adults is to look at both the height and weight of the individual. This measurement is known as body mass index (BMI). It is calculated by dividing the body weight in kilograms (kg) by the height in metres squared (m^2). For example an individual who is 1.57 m tall (5'2") and weighs 54.5 kg (120lb), would have a BMI of 22. A BMI between 20-25[11,12] represents a "healthy weight zone" which is associated with a lower occurrence of high blood pressure, diabetes, heart disease, and cancer. (Another method of calculating BMI is provided on the last page of this newsletter).

Chart 1 shows the percentage of males and females in Hamilton-Wentworth (HW) between the ages of 20 and 64 years in each of four weight "zones" based on BMI. In the 1990 Ontario Health Survey (OHS), almost 60% of HW residents aged 20-64 years were in the healthy weight zone, while 12.9%

Chart 1. Weight Zones* for Adults (20-64 years) by Sex - Hamilton-Wentworth, 1990



* Weight zones based on Body Mass Index (BMI) = weight (kg)/height (m) squared.
** Hamilton-Wentworth population aged 20-64: males - 129,600; females - 127,500.
Source: 1990 Ontario Health Survey, Hamilton-Wentworth Regional Report, 1992.

were below the healthy zone and 26.8% were above it.

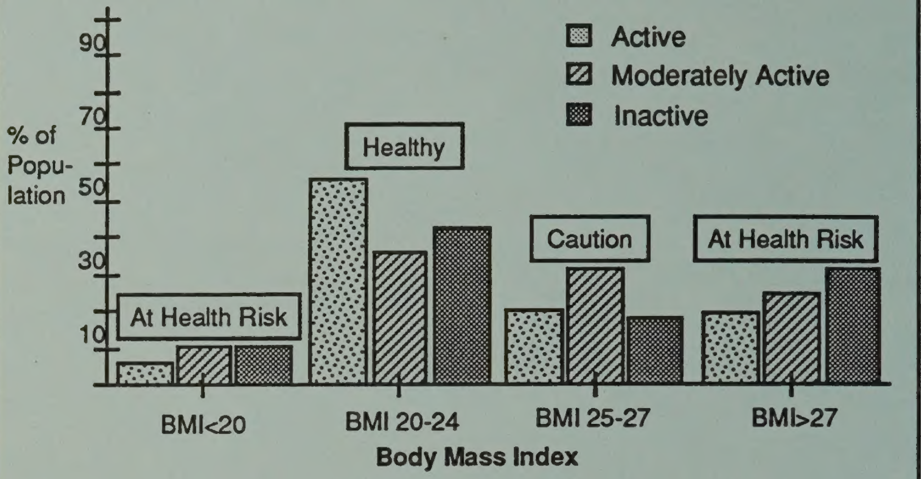
Using BMI to look at healthy weights is not appropriate for children, adolescents, pregnant women, seniors (aged 65+) or certain athlete populations (e.g., distance runners, weight lifters)[11,12].

...Body Mass Index above and below the "Healthy Zone"

More men (33%) than women (21%) in HW were above the healthy weight zone in the 1990 OHS. Excess weight due to large amounts of body fat is related to several health problems including heart disease, diabetes, and respiratory disease.

More women (12%) than men (<4%) have BMIs below the healthy zone. Low BMI is associated with reduced bone mass and increased risk of osteoporosis[13]. It may also indicate malnutrition which may have been caused by heavy smoking, heavy alcohol consumption, or eating disorders[14].

Chart 2. Body Mass Index (BMI)* by Activity Level, Ages 20 - 64 Years, Hamilton-Wentworth, 1990**



* Body Mass Index =weight (kg) /height (m squared)

** Active = >2.9 kcal/kg/day energy expenditure; Moderate = 1.5-2.9 kcal/kg/day; Inactive = <1.5 kcal/kg/day

Source: 1990 Ontario Health Survey, Hamilton-Wentworth Regional Report, 1992

How does physical activity relate to healthy weight?

Appropriate physical activity has a positive effect on all three components of body weight. It reduces body fat, promotes the development of healthy bone, and increases and strengthens muscle.

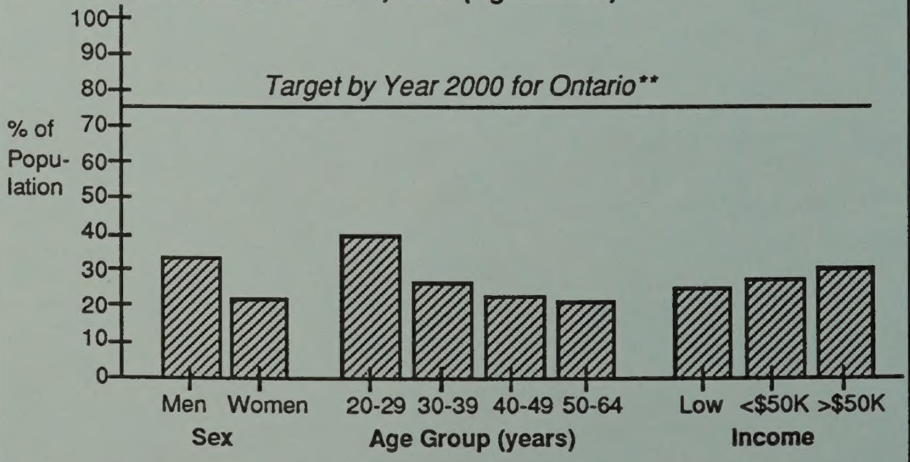
Type, frequency and duration of activity are all important considerations in the relationship between physical activity and healthy weight. In the 1990 OHS, these three measures were combined to calculate the daily energy expenditure of respondents and to group people into inactive, moderately active, and active categories. *The "moderately active" category represents the minimum level of activity recommended for maintenance of healthy weight*[15]. It is also consistent with the recommendations for physical activity in the Mandatory Health Programs and Services Guidelines for Ontario public health units[16].

Chart 2 shows the proportion of HW residents in each of the activity categories who are at health risk due to high or low BMI. The most active HW adults were less likely to be in the at risk weight zones (high-19%;low-6%) compared with those who were moderately active (24%;10%) or inactive (30%;10%).

How active are we?

Chart 3 gives the percentage of HW adults who were at least "moderately active" by sex, age and income in 1990. As in 1989[17], females in HW were less active than males. Those in the lower income groups were also less active. The proportion of moderately active individuals also drops off with each successive age grouping. Activity levels for those aged 20-64 in Hamilton-Wentworth were much lower than the targetted levels for health as set by the province[16].

Chart 3. Percent Moderately Active* by Age, Sex and Income, Hamilton-Wentworth, 1990 (Ages 20-64)



* Moderately Active = >1.5 kcal/kg/day energy expenditure, e.g. - walking briskly for 40 minutes, 3 times per week

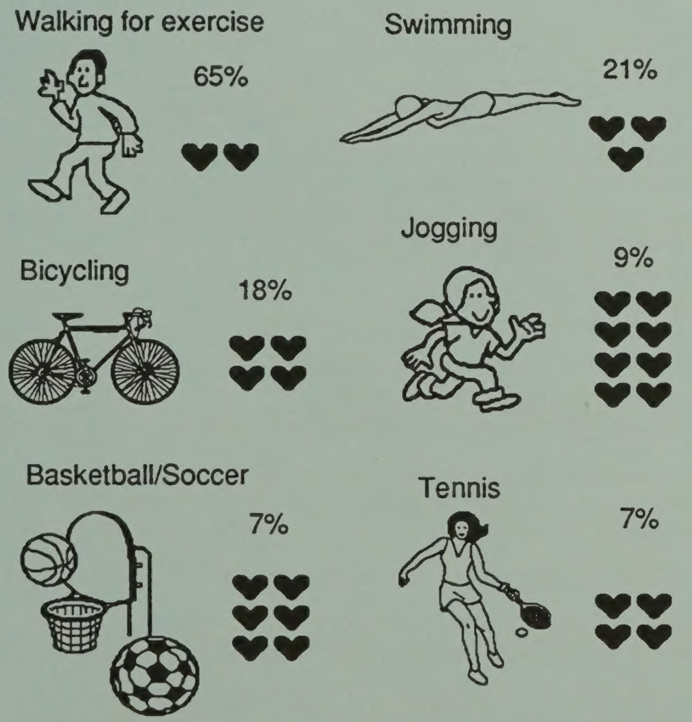
** Source: Mandatory Health Programs and Services Guidelines for Public Health Units, Ontario Ministry of Health, 1989

What type of activity is best?

The most effective type of activity to maintain healthy weight, is one which requires sustained movement of large muscle groups (e.g., legs, trunk, arms) over a long period of time (at least 15 minutes continuously)[15]. Chart 4 gives examples of these types of activities with the corresponding energy demand for each activity and the proportion of Hamilton-Wentworth residents who had participated in that activity in the month previous to the 1990 OHS.

Participation levels were highest for walking (65%) which is the least demanding, but most convenient and accessible activity. Other popular activities were swimming (21%), cycling (18%), jogging (9%), basketball or soccer and tennis (all 7%).

Chart 4: 1990 Physical Activity Patterns in Hamilton-Wentworth - Percent Participation and MET* Value of Popular Physical Activities



*♥ = 1 MET = activity requires energy expenditure of 1 kcal per kg per hr

Percentages indicate % of H-W residents, aged 20-64 years who participated in that activity in the past month.

Source: 1990 Ontario Health Survey, Hamilton-Wentworth Regional Report, 1992

Feelings about Body Weight

Nearly half (47%) of Hamilton-Wentworth residents planned to lose weight in the year following the OHS. This included 82% of those whose body mass was in the highest risk zone (BMI >27). However, nearly half of those aged 20-64 who wanted to lose weight were already in the healthy weight zone[9].

Feelings about Physical Activity

Forty-four percent of the inactive group believed that their current activity level could lead to future health problems compared with 19% of the regularly active respondents. However, only 39% of the inactive group planned to increase their exercise in the next year compared with 56% of the regularly active group[9].

What can we do in Hamilton-Wentworth?

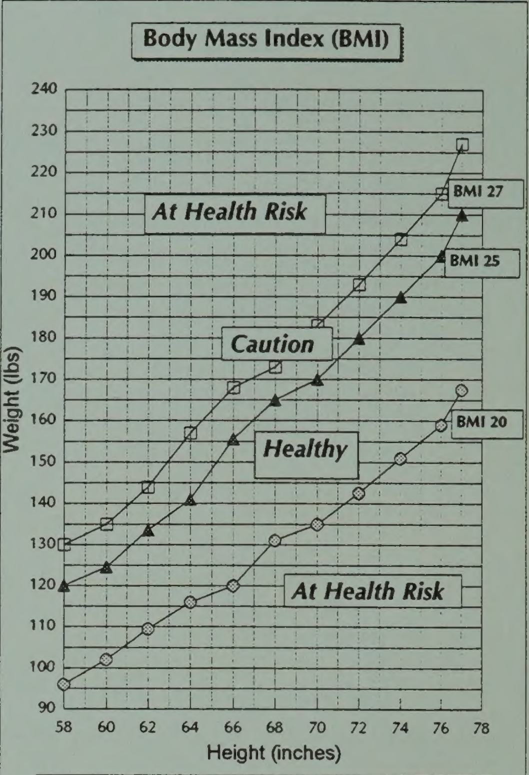
Health and Welfare Canada has stated that in order to promote healthy weights, communities face the challenge of encouraging citizens to develop and maintain appropriate eating habits and physical activity patterns[11,12]. Hamilton-Wentworth is meeting this challenge with initiatives which promote both healthy eating and physical activity. Several of these are listed below:

- ✻ Programs such as the *Mall Walks* at *Limeridge* and *Centre Malls* in Hamilton offer the opportunity to be active with family (including young children) and friends at no cost. This type of program is important since people are more likely to be active if their friends are also active and if the activity is inexpensive and convenient[18-20].
- ✻ The *YMCA* offers a program, *Y Weight,* which teaches participants about the importance of both healthy eating and regular physical activity in weight control.
- ✻ Employers such as *McMaster University* provide workplace physical activity opportunities as well as assessments of both physical fitness and healthy weights.
- ✻ The *Region of Hamilton Wentworth* recently made changes to allow for bike lanes on Main and King streets in Hamilton which encourages cycling to work, school or shopping.
- ✻ The *school boards* in HW allow community use of schools in the evenings and often provide physical activity programs for individuals and/or families.
- ✻ The *Bruce Trail Association, Iroquoia Section,* maintains 70 kilometres of trails in the HW region which provide everyone with the opportunity to enjoy physical activity and our natural environment.
- ✻ The *Workplace Health Promotion Program* is a new programme with the Hamilton-Wentworth Department of Public Health Services which is available to employers and employee groups. Support is available for planning and implementing healthier lifestyle practices. Information about the program is available through the Nursing Division (546-3547).
- ✻ The *Culture and Recreation Departments* in HW offer recreation centre memberships at a reasonable price. These facilities offer people of all ages the opportunity to participate in regular physical activity.

Methods

The 1990 Ontario Health Survey provides health-related information on the residents of Hamilton-Wentworth. It was a representative, random survey of 1,641 persons with a response rate on the sections relevant to physical activity and body weight of 79.9%. Body mass index (see nomogram for easy calculation) was estimated only for those aged 20-64 years (n=969).

Respondents were asked to report on their participation in each of 17 common physical activities. Activities on the list had been included in previous Ontario and Canadian physical activity surveys. Respondents were also given the opportunity to add activities which were not on the list. Energy demand (MET) values were assigned to each activity according to the oxygen requirement of the activity when carried out at medium intensity. The MET values were used in combination with the reported duration (in minutes) and frequency (number of sessions per week) of the activity to estimate daily energy expenditure (EE) for each individual. Respondents were then categorized as "inactive" (EE < 1.5), "moderately active" (EE = 1.5-3.0) or "active" (EE > 3.0). Approximately 8% of the respondents did not fully complete the activity section of the questionnaire and therefore could not be categorized.



Nutrition Services Ottawa Carleton Health Department, 1989.

Note: Height (m) = height (in) x 2.54; weight (kg) = weight (lbs) /2.2

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Your comments and suggestions are important to us and are being incorporated into publications from the Health Priorities Analysis Unit like this ***Infowatch***. Let us know what you think about this issue. Our address and telelphone number are:

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The Health Priorities Analysis Unit is sponsored by the Educational Centre for Aging and Health which was established in 1987 with funding from the Ontario Government. Support is also received from the Faculty of Health Sciences, McMaster University, and the Hamilton-Wentworth Department of Public Health Services.

Infowatch

Health Priorities Analysis Unit
McMaster Faculty of Health Sciences

A Service of the Health Priorities Analysis Unit
To Inform People about Research on Health

June 1994
Volume 7, Number 1

Nurturing Health and Health Care in Hamilton-Wentworth

The "Nurturing Health" report of the Ontario Premier's Council on Health, Well-being and Social Justice provides a new way of thinking about health and health care.[1] In the report, health is defined as the quality of life of an individual; health care as the services, procedures or programs that physicians, nurses and health professionals provide to maintain or restore health. Patient expectations for health care are increasing[2] as are the costs of health care with new technological advances (such as new drugs and hospital equipment).[3]

Health care is not the only factor in determining the health of residents.[1] A wide variety of factors influence health within one's lifetime. Health is linked to prosperity, social and physical environments and genetics.[4] This improved understanding of health stands in contrast to health being linked only to health care ("the medical model").

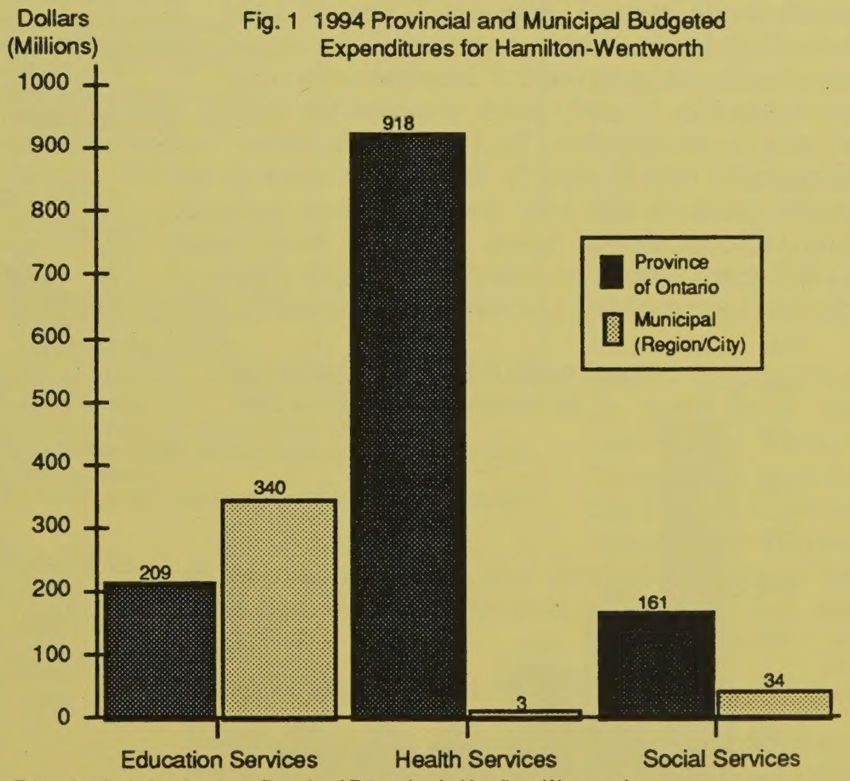
What's this issue about?

A growing tension exists between what is "best" for the health of an individual and what is "best" for the community's health. In the 1990's, communities who wish to promote and protect the health of their residents are faced with two major challenges. First, communities must actively support and allocate appropriate levels of resources to address all the determinants of health. Second, they must control expenditures on health care in order to have money left over to support other activities such as housing, transportation, jobs, education and child care. This **INFOWATCH** describes these challenges in Hamilton-Wentworth.

How much does each government pay for health, education and social services?

Local health, education and social services are very expensive and beyond the limits of taxes available to municipalities. Thus, in Ontario, the province contributes to the cost of running local health, education and social services as shown in Figure 1.

Fig. 1 1994 Provincial and Municipal Budgeted Expenditures for Hamilton-Wentworth



Education includes the three Boards of Education in Hamilton-Wentworth.
Source: Board of Education for the City of Hamilton; Hamilton-Wentworth Board of Education; The Roman Catholic Separate School Board. 1994 Budgets.

Health expenditure data was for 1990/91 (most recent available), however, these figures should be similar to 1994 data. See breakdown of the 918 million in Figure 2.
Source: Ontario Ministry of Health, Information, Planning and Evaluation Branch. Ontario Health Expenditures 1990-91. 1993.

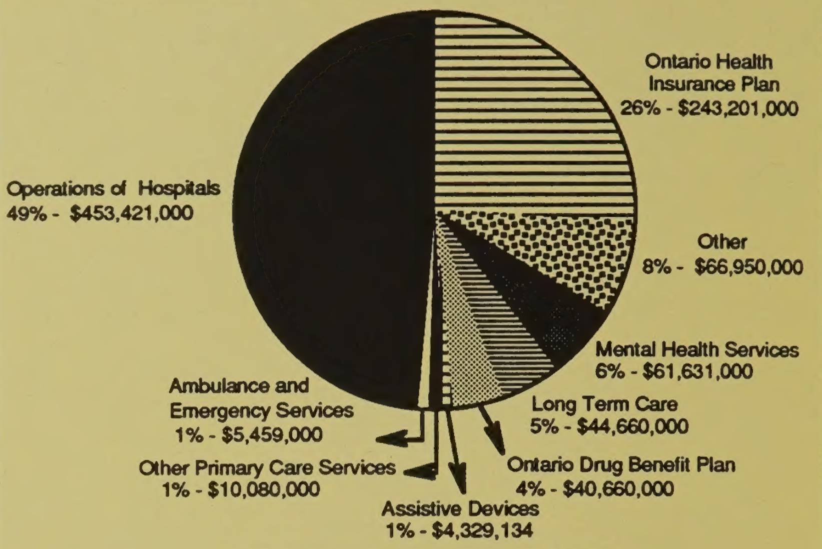
Social Services includes Children's Aid Society, General Welfare Assistance and Homes for the Aged.
Source: The Regional Municipality of Hamilton-Wentworth. 1994 Budget.

In Hamilton-Wentworth, the Province of Ontario is the major contributor to local health services providing virtually 100 percent of the expenditures in this sector ($918 million). For education services, the municipality, through the three school boards, contributes 66 percent of the expenditures in this sector ($340 million). Social services are 83 percent ($161 million) paid by the province and 17 percent ($34 million) paid for by the Regional Municipality of Hamilton-Wentworth (Figure 1).

How are resources allocated?

About half (49%) of the almost $1 billion provincial government health care expenditures in Hamilton-Wentworth in 1990/91 were allocated to providing care through hospitals and 26% were allocated to physicians and their clinics (see Figure 2). Long term care and mental health services received 5% and 6%, respectively.

Fig. 2 Health Care Expenditures in Hamilton-Wentworth Health District - 1990/1991



Total Dollars 100% - $918,290,193

Source: Ontario Health Expenditures 1990/91, Ministry of Health

This does not include 20% of the operations of hospitals which comes from non-Ministry of Health sources (eg. out-of-province fees) and individual expenditures (e.g for drugs)

"Operations of Hospitals" includes Chedoke-McMaster Hospitals, Hamilton Civic Hospitals, St. Joseph's Hospital, St. Peter's Hospital and the Ontario Cancer Treatment and Research Foundation.

"Long Term Care" includes Extended Care Program, Home Care Assistance, and Placement Coordination Services .

"Ontario Health Insurance Plan" includes physician services and their clinics.

"Mental Health Services" includes the Hamilton Psychiatric Hospital, community mental health facilities, alcohol and drug dependency, Addiction Research Foundation, and Provincial Aid — Homes for Special Care.

"Other Primary Care Services" includes Hamilton-Wentworth Department of Public Health Services.

"Other" includes capital grants to health facilities, clinical education, operations of hospital-related facilities, health resources development plan, health innovation fund and Hamilton-Wentworth District Health Council.

What is the health status of Hamilton-Wentworth residents?

Mortality and morbidity data provide objective, although negative, measures of a population's health status.[5] Potential Years of Life Lost (PYLL) provides a measure of the major causes of premature death.[5] This indicator uses years lost due to early death between the ages of one to seventy-five. In 1990 in Hamilton-Wentworth (see Figure 3), the major causes of potential years of life lost, for men, were ischemic heart disease (2,806 years lost) and lung cancer (1,663 years lost). For women, the major causes of potential years of life lost were breast cancer (1,086 years lost) and ischemic heart disease (842 years lost).

In summary, the health status of Hamilton-Wentworth residents, as measured by potential

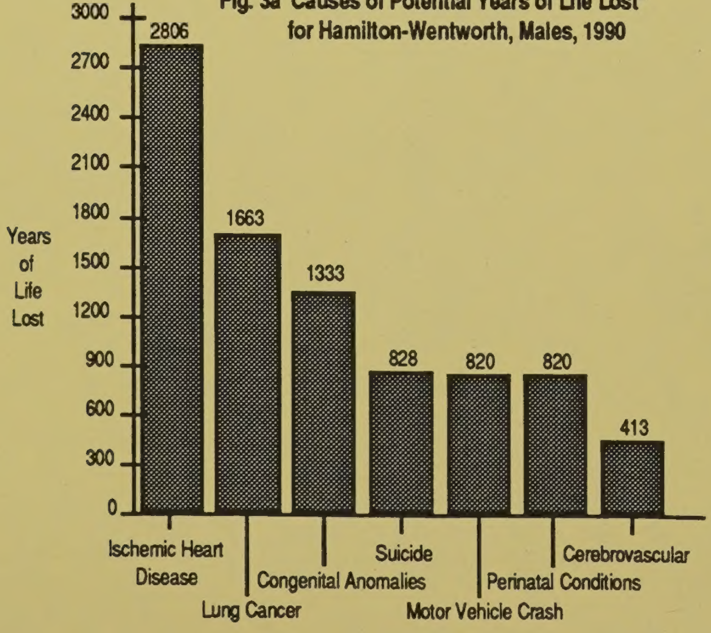


Fig. 3a Causes of Potential Years of Life Lost* for Hamilton-Wentworth, Males, 1990

Source: Ontario Ministry of Health 1988-1991 Morbidity and Mortality Reports, 1992

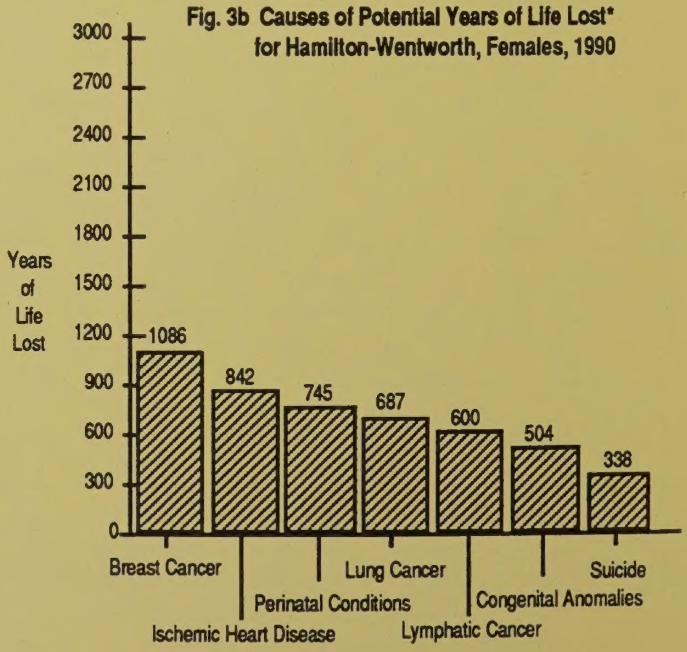


Fig. 3b Causes of Potential Years of Life Lost* for Hamilton-Wentworth, Females, 1990

Source: Ontario Ministry of Health 1988-1991 Morbidity and Mortality Reports, 1992 years of life lost, is primarily influenced by the chronic diseases, heart disease and cancer. These major causes of premature mortality are known to have multiple determinants.[4]

What are the determinants of health?

Social Environments

“Family and friends are ‘good medicine’.[1]” Support from family and friends throughout life is an important determinant of a healthy, long life. Studies demonstrate this support is as important to health as physical health such as blood pressure and diet.[3] Health is also affected by the quality and number of social contacts.[6] “Older women with few social contacts are three times more likely to die than older women with many contacts. For older men, the risk of dying is doubled for those who have few friends and acquaintances.[7]”

“Like family members, employees tend to acquire new skills more effectively in firms that make a strong commitment to on-the-job learning.[2]” Work environment studies[8] “... have shown that men with stressful jobs and little decision-making authority are more likely to develop high blood pressure and to die from heart attacks than those who have more freedom to make decisions.[1]”

Table 1: Examples of Indicators for the Determinants of Health and Size of the Problem in Hamilton-Wentworth

Determinant of Health	Indicator	Size of the Problem in Hamilton-Wentworth (Pop. 451,665)
Social Environment	Number of Suicides, 1991(1)	28
	Number of Divorced Individuals, 1991(2)	23,035
	Estimated Number who have ever seriously thought about Suicide, 1990(4)	36,700
Physical Environment	Lost-Time Allowed Claims, Workers' Compensation Board, 1992(3)	10,250
	Number of Injuries Requiring Hospitalizations and Deaths due to Motor Vehicle Accidents, 1991(1)	445
Individual Responses	Estimated Number of Smokers, age 12 and up, 1990(4)	104,900
Productivity and Wealth	Number Unemployed, 1991(1)	23,239
	Number on Welfare and/or Family Benefits, 1992(5)	33,240

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Poor social environment could have contributed to the 28 suicides and the 23,035 people reporting being divorced in Hamilton-Wentworth in 1991 (Table 1). There were an estimated 36,700 who ever seriously thought about suicide (Table 1).

Physical Environment

“Unsafe work environments can and do lead to disability or death.[1]” In 1991, Hamilton-Wentworth had 10,250 Worker's Compensation Board claims (Table 1). An estimated 30% of the claims related to back injuries. Another 30% related to injuries involving overexertion.[9]

In 1991 in Hamilton-Wentworth, there were 445 motor vehicle injuries and deaths (Table 1). “In recent years, there has been a reduction in the overall number of traffic collisions per number of licensed vehicles in Canada[10], likely due to increased use of seat belts and changing attitudes toward drinking and driving.[1]” Much more can be done in Hamilton-Wentworth to make structural changes to roads and intersections to prevent collisions, including collisions with pedestrians.[11]

Collective as well as Individual Responses

Much publicity is given to the need for individuals to have healthy behaviours such as not smoking (Table 1), not drinking in excess, physical activity and diet. However, interdependence to achieve health is as important as independence (changing one's own behaviour). For example, it is known that employees in low-status jobs that experience few opportunities for learning and decision-making are more likely to smoke (the main preventable cause of cancer and heart disease).[8] After family and friends, communities are most important in promoting health — for example, community support for social interaction (in libraries, schools, faith groups, recreation programs, clubs, etc.), housing, adequate food, good air quality. “Communities must be prepared to protect and assist women, children and seniors in abusive situations, and to protect the community from street violence and crime.[1]” Research in Italy and the United States has shown that communities did not become civil (nurturing) because they were rich, but rather became rich because they were civic.[12,13]

Productivity, Wealth and Health

Health is clearly linked to income and socioeconomic status. For a population, a high average wealth per person is related to a long life expectancy.[14] A smaller gap between the higher and lower ranges of income is linked to a longer average life expectancy.[8] A higher rate of unemployment has also been linked to higher mortality and morbidity.[15,16] In 1991, 23,239 Hamilton-Wentworth residents were unemployed and in 1992, 33,240 were on welfare and/or family benefits (Table 1) the highest in ten years.

How can Hamilton-Wentworth nurture its health?

- Health care delivery changes to support a broader view of health to respond to community needs, and involve more community constituencies in decision-making. Public health nurses, for example, are assisting citizens groups in improving the quality of life of their neighbourhoods such as the Crowne Point neighbourhood project.
- Reallocation of resources within the health care sector to increase the value, in terms of improved health, which we receive from use of our tax dollars. For example, health care funds have been reallocated to AIDS prevention programs.
- Reallocation of resources to sectors other than the health sector. For example, the social, environmental and economic impact on health and quality of life of all provincial and regional programs for Hamilton-Wentworth are being assessed under the Regions' "Sustainable Community Decision-Making Guide" for achieving Vision 2020, the Region's Strategic Plan.
- Increased empowerment of citizens to make informed decisions on matters that affect their health. For example, the Region's Health and Social Services Departments in 1993 explored new ways of public participation in decision-making about government funds.
- Increasing accountability. For example, through the Hamilton-Wentworth District Health Council, care providers, patients, administrators and citizens are working together to ensure only effective long term care is provided, and in an efficient way as required by provincial long term care reform.

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Let us know what you think about this issue. The contact person for this issue is Larry W. Chambers. Our address and telephone number are:

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Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A service of the Health Priorities Analysis Unit to inform people about research on health.

October 1994
Volume 7, Number 2

Falls and Seniors
in Hamilton-Wentworth

What's this issue about?

For seniors in our community, falls are a major threat to their health status and independence. A recent report on causes of injury, identified falls by seniors as one of four priority themes for injury prevention for Ontario (1). An earlier issue of ***Infowatch*** (2) reported falls by seniors (65 years and older) to be one of the major causes of injury, death and disability in Hamilton-Wentworth. Thus, prevention of falls will improve the health of seniors. This issue of ***Infowatch*** will present data related to falls by seniors in Hamilton-Wentworth and the associated factors. In addition, the prevention of falls will be addressed and several local initiatives will be described.

How big a problem is it?

Falls and hospitalization

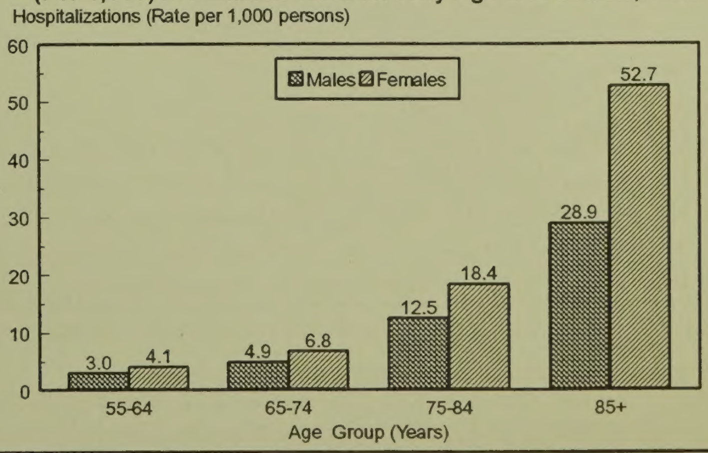
The exact number of falls is difficult to determine since many falls do not result in serious injuries which require medical attention (3). Falls requiring treatment at hospital emergency rooms or by a family physician are not included in the data on falls resulting in an admission to hospital (4). In 1990 alone, 763 Hamilton-Wentworth residents aged 65 years or older were admitted to hospital because of injuries from a fall. Chart 1 shows that the rate of hospitalizations is higher in each successive 10-year age group from age 55 years in both men and women. Elderly women, however, account for almost three times as many hospitalizations as a result of a fall as men, a finding which is consistent with other studies (5). The rate of hospitalization due to falls for males is similar for the 55 to 64 and 65 to 74 age groups (3.0 and 4.9 per 1,000 males, respectively), after which it more than doubles to 12.5 per 1,000 for 75 to 84 year olds. The hospitalization rate for falls is higher for females, in each age group, reaching 52.7 per 1,000 for the 85 and over age group - a rate almost double that of the corresponding rate for males (28.9).

How long are hospital stays after a fall?

In Hamilton-Wentworth in 1990, falls accounted for 11,338 hospital days in hospital for men 65 years and over and 26,032 for women over 65 and over. Ninety percent of all days spent in hospital for fall related injuries were among older adults. The average length of hospital stay for elderly men is 49 days and 53 days for elderly women (4).

Hospitalization for injuries to seniors of Central West Ontario (Brant, Halton, Haldimand-Norfolk, Hamilton-Wentworth, Niagara, Wellington-Dufferin-Guelph, Waterloo) were more frequently associated with other illnesses within the same patient (46%), complications following treatment (21%), and operative procedures (44%) than were hospitalizations for injuries in those less than 65 years of age (5%, 18%, 40% respectively) (6).

Chart 1. Hospitalization Rate for Falls* by Older Adults (Per 1,000) in Hamilton-Wentworth by Age and Gender, 1990



Number of Hospitalizations	64	93	81	138	89	207	44	204

Source: Morbidity and Mortality Reports, Ontario Ministry of Health, 1992
*Reason for hospitalization recorded by discharge diagnosis

Where do seniors go after being in hospital?

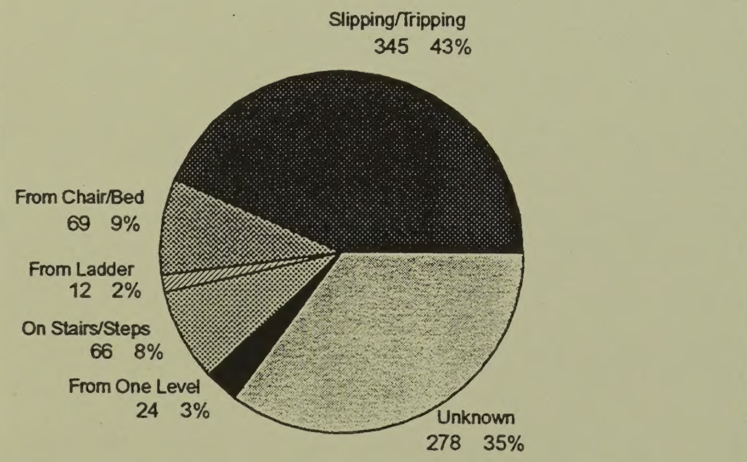
Hospital stays may be longer for older adults because there is no one at home to take care of them or because there are no beds available in long-term care facilities. In 1992 in Central West, only 45% of seniors hospitalized for an injury were discharged home compared with 91% of those under 65 years (6). Seniors were also more likely to be discharged to home care (13%vs 3%) or to a nursing home, home for the aged or chronic care facility (25% vs <1%) compared to younger age groups.

Where and how do seniors fall?

The Ontario Trauma Registry reports that in 1992 injury-producing falls (for all ages) in Central West were much more likely to occur in the home (1045 (43%)) or in residential institutions (321(13%)) than in other locations (6). The problem of falls by elderly at home was even more pronounced in women where 48% of falls occurred at home compared with 36% for males. An additional 23% of female falls occurred in a residential institution compared with 2% for males.

Chart 2 shows that in 1990 in Hamilton-Wentworth, hospitalizations among seniors resulting from a fall were most often the result of slipping or tripping (345 (43%) (7). Falls from a chair or bed and falls from steps or stairs were the next most frequent type (69 (9%) and 66 (8%), respectively). For 35% of the reported falls by seniors in Hamilton-Wentworth, the type of fall was unknown.

Chart 2. Number and Percent of Hospital Admissions for Falls by Persons 65 Years and Over, by Type of Fall, Hamilton-Wentworth, 1990

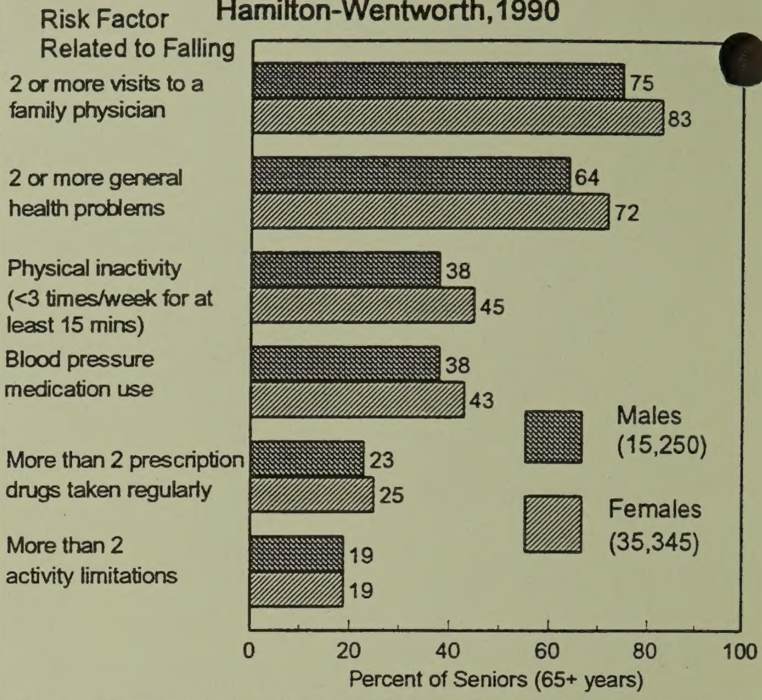


Source: Ontario Trauma Registry, Ad Hoc Report for Central West Ontario, 1993

A closer look at factors related to falls

Numerous factors have been linked to falls by seniors. (5,8-13). Chart 3 shows the percent of persons 65 and over in Hamilton-Wentworth who have factors which research has identified as placing seniors at risk of falling (14).

Chart 3. Percent of Persons 65 Years and Over Who Have Risk Factors for Falls by Gender, Hamilton-Wentworth, 1990



Source: 1990 Ontario Health Survey, Regional Report - Hamilton Wentworth, Ontario Ministry of Health, 1992.

As illustrated by Chart 3, over 70% of seniors (75 ar 83% for males and females, respectively) have had two (more visits to their family physician in the past year and ov 60% of seniors (64 and 72% for males and females) re two or more health problems. Approximately 40% of tl seniors in Hamilton-Wentworth are physically inactive i that they exercise less than three times per week for 1 minutes, a level which is necessary to maintain adequa muscular strength and joint mobility (5). Blood pressu medication is used by approximately 40% of Hamilto Wentworth seniors, medication which may put them at risk (falling. About 25% of seniors report taking more than tw prescription drugs and multiple medication use may als increase the risk of falling (refer to upcoming ***Infowatch*** o this topic). A high proportion (>50%) of seniors have pai which limits at least one of their activities, and 19% have pai limiting two or more of their activities.

In addition to these factors, other researchers hav reported that there is a higher incidence of injury-producin falls in cold climates compared with warm climates (15, 16 Certainly, snow and ice present a challenge in getting aroun safely in the winter. A study of physical activity in Ontari indicated that the population in general, and seniors i particular, are much less likely to participate in regul physical activity in November than in June (16). This l to loss of mobility and strength which can result in a increased risk of falling.

Recommendations of the Ontario Medical Association Subcommittee on Falls in the Elderly:

In examining both environmental and physical factors which relate to falls among seniors, the Ontario Medical Association made the following five recommendations for community prevention initiatives (17):

- ✓ Seniors should be advised that regular physical activity is one of the most effective means to protect themselves from injury due to falls.
- ✓ A standard protocol to assess home safety, designed to prevent falls, should be readily available through existing community services including occupational therapy, regional geriatric assessment and home-care programs.
- ✓ Family physicians should assess elderly patients for falls, regardless of whether the injury results from falls. Assessment should include gait, balance, vision and hearing and include identification of "fear of falling".
- ✓ Avoid presciption of long-acting benzodiazepines for the elderly whenever possible. Anti-depressants, anti-psychotics, psychotropics and medications with sedative effects should be prescribed in doses and at intervals appropriate to the elderly, and for limited time periods.
- ✓ Drug regimens in the elderly should be reviewed at regular intervals, especially for patients using multiple drugs, and whenever there is a change in medication. Physicians, pharmacists, and community nurses can coordinate this review to improve safety.

What are we doing in Hamilton-Wentworth?

The Ontario Medical Association advises that while changing a high-risk environment is often easier than correcting a chronic disability, simple and inexpensive **improvements in vision and hearing, and the addition of regular physical activity**, may be the most important ways to prevent falls among seniors (17).

Several **programs** in Hamilton-Wentworth address the problem of falls among seniors. Some of these are described here:

St. Peter's Hospital Falls Clinic - Seniors who have either fallen or who are at high risk for falling are assessed in the "falls clinic" by a geriatrician and registered nurse to determine the likely causes. Once the assessment has been completed, actions can include rehabilitation at St. Peter's Hospital.

Easy Street Environments® at St. Peter's Hospital recreates the setting of a city street complete with a bank, grocery store, restaurant, car and bus. All the hazards that these places present, such as uneven pavements, curbs, turn stiles and carpets have been incorporated. Therapy on Easy Street Environments® enables people to improve their mobility and to increase their confidence. A randomized controlled trial is currently being conducted to evaluate the effectiveness of Easy Street Environments® for rehabilitation and the prevention of falls.

Mall Walks - Limeridge, East Gate and Centre Malls open early several mornings a week to offer a safe walking environment.This drop-in, no charge program is offered over the fall,winter, and spring months.

The Geriatric Programs at St. Joseph's Community Health Centre and the Day Hospital and Geriatric Outpatient Clinics at Chedoke-McMaster Hospitals offer support to seniors living in the community.

Seniors' YWCA Day Programs/Activity Programs include square dancing and line dancing as well as swimming for improving joint mobility and muscle strength without stress on joints.

Helping Hands offered through the Social Services Department of the Regional Municipality of Hamilton-Wentworth Social Services provides a work program for General Welfare Assistance and Family Benefit Assistance recipients with home support for seniors living independently in the community. Services offered include housing cleaning, yard work, snow shovelling.

Snow/Ice Removal programs - City of Hamilton Streets By-Law 9329 requires residents to clear the snow from city sidewalks in front of their property within 24 hours of the end of a snowfall to improve safety.

Other **resources** or **services** are available in Hamilton-Wentworth including the following:

The Senior Citizens Safety Committee (a committee of the Trauma Prevention Council, Hamilton-Wentworth) has focused on "prevention through to intervention" in its three-prong approach. The committee has developed a home safety checklist titled "Are You In Jeopardy?" which will be distributed late fall. A video will accompany the checklist. Also, the Committee works with the St. Peter's Falls Clinic described above.

VON Home Care offers in-home nursing care to those confined to their homes.

Safe Home Assessments are conducted by Public Health Nurses. As well, Public Health Nurses assist seniors in starting physical activity groups and programs in seniors' centres and residential buildings.

Methods

Statistics on hospitalizations and days spent in hospital at the regional level were compiled from the 1992 Morbidity and Mortality Report which is provided annually by the Ontario Ministry of Health (4). There is a two-year time lag in this data such that the report used for this newsl[illegible] includes statistics for each year from 1986-1990. These data are provided to each of the 42 public health units in Ontario and include breakdowns by ten year age groupings as well as by gender. Data for Central West Ontario was provided for this newsletter by the Ontario Trauma Registry (6,7). The 1990 Ontario Health Survey (OHS) provides health information on the residents of Hamilton-Wentworth (14). It was a representative, random survey of 1,641 persons aged 12 years and older, and included 187 respondents who were 65 years or older.

Now Let's Hear From You

Your comments and suggestions are important to us and being incorporated into publications from the Health Priorities Analysis Unit like this ***Infowatch.*** Let us know what you think about this issue. The contact person for this ***Infowatch*** is Lenore Dickson. Our address and telephone number are:

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Infowatch is a newsletter of the Health Priorities Analysis Unit, and is published when new data are available. It describes health and social data similar to that found in the ***Fact Book on Health in Hamilton-Wentworth (1994).***

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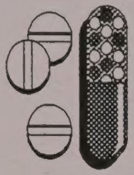
The Health Priorities Analysis Unit is sponsored by the Educational Centre for Aging and Health which was established in 1987 with funding from the Ontario Government. Support is also received from the Faculty of Health Sciences, McMaster University, and the Hamilton-Wentworth Department of Public Health Services.

Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A Service of the Health Priorities Analysis Unit
to inform people about research on health

December 1994
Volume 7, Number 3



A Pill for Every Ill?

Medication use by seniors in Hamilton-Wentworth

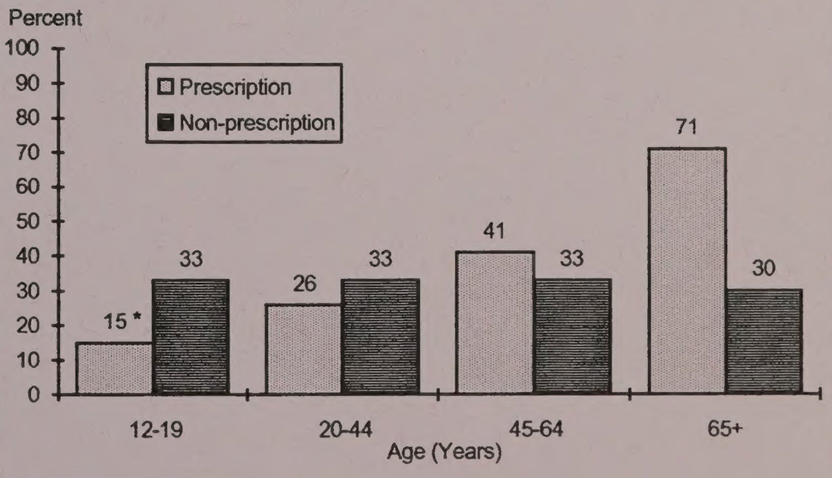
What's this issue about?

As the proportion of seniors, those 65 years of age and over, increases in the population,[1] concern over the treatment of seniors' health problems is also increasing.[2] Seniors tend to have more health problems than the younger population for which multiple medications may be prescribed. The use of different medications at one time can lead to harm.[3,4,5] Many studies have reported that seniors are more likely than others to be admitted to hospital for drug-related illnesses.[2,6,7] This ***Infowatch*** will assess the extent of medication use by seniors at home in Hamilton-Wentworth based on data from the 1990 Ontario Health Survey.[8] Possible implications of multiple medication use and information on agencies and programs in Hamilton-Wentworth that address this issue will be presented.

How many seniors are on drugs?

In 1990, 69% of seniors in Hamilton-Wentworth reported having taken a medication (prescription or non-prescription) at least once a week for the last 4 weeks.[8] This was the highest rate of frequent medication use reported by any age group. Chart 1 shows the recent use of prescription and non-prescription medications by age in Hamilton-Wentworth. The rate of use of prescription drugs is higher in older age groups. Of those seniors surveyed 71% reported use of prescription medications in the past two weeks. Non-prescription medication use was not found to be more frequent in older age groups.

Chart 1. Percent of Hamilton-Wentworth residents using any prescription medications and the percent using any non-prescription medications in the last 14 days by age, 1990



* Based on small numbers
Source: Ontario Ministry of Health, 1990 Ontario Health Survey, 1992

How many prescriptions are seniors taking?

Approximately 45% of seniors in Hamilton-Wentworth reported taking three or more different prescription medications in the past four weeks.[8] There is an association between the number of medications used and age as shown in Chart 2. In Ontario, 17% of people aged 55-64 reported using

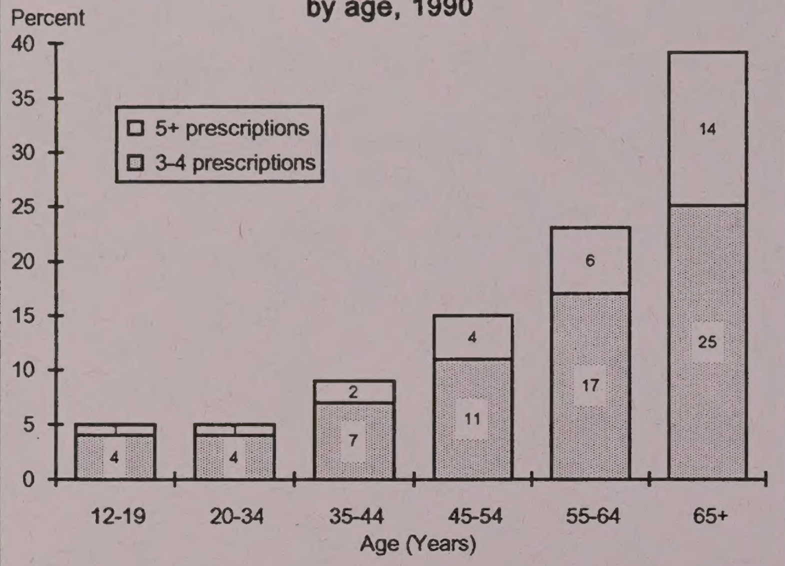


Chart 2. Percent of Ontario residents using multiple prescription drugs in the past 4 weeks by number used and by age, 1990

Source: Ontario Ministry of Health, 1990 Ontario Health Survey, 1992

three to four prescription medications compared with 25% of those 65 and over. The use of five or more medications was reported by 6% of people ages 55-64 and by 14% of those 65 and over. Seniors in Ontario are covered by the Ontario Drug Benefits program and the use on average is 27 prescription drug claims per year according to the Ministry of Health.[9]

Adverse drug reactions (ADRs)

• What are the causes?

Seniors who take multiple medications and/or have difficulty adhering to complicated medication instructions have an increased risk of medication problems and adverse drug reactions (ADRs).[3,4,5,10,11,12] The World Health Organization defines an ADR as "any harmful or unwanted effect caused by a drug taken in its regular dosage."[5]

Other factors besides multiple and complicated medication use can contribute to ADRs. For example, physical changes with age can also lead to problems with medication. These physical changes can include a decline of kidney and liver function, an increase in body fat, and a decrease in total body water with age. The body's ability to distribute the drug, break it down, and remove it can be affected by these changes. This decreased ability to tolerate drugs leads to medication related problems including ADRs.[13,14]

Health providers should be aware that many factors including age, multiple medication use, and complicated medication use can contribute to ADRs in seniors. A recent Canadian Medical Association (CMA) policy summary indicates that although prescribing patterns vary, physicians' prescribing knowledge may be inadequate.[7] Problems for seniors can also be caused by poor communication between physicians, nurses, and other health care team members. In addition, the use of different pharmacies by seniors prevents pharmacists from identifying problems with multiple medication use.

• Misdiagnosis of ADRs

ADRs can easily be mistaken for other conditions typically associated with aging. Confusion, falls, depression, deterioration of function, and urinary incontinence are frequently due to ADRs.[5,15] A recent ***Infowatch*** looked at falls and seniors in Hamilton-Wentworth.[16] The World Health Organization has reported that the diagnosis of ADRs is difficult and may be particularly difficult in elderly people. The report further states that "doctors tend to forget that virtually any symptom in an old person may be drug-induced or aggravated by drug treatment".[5]

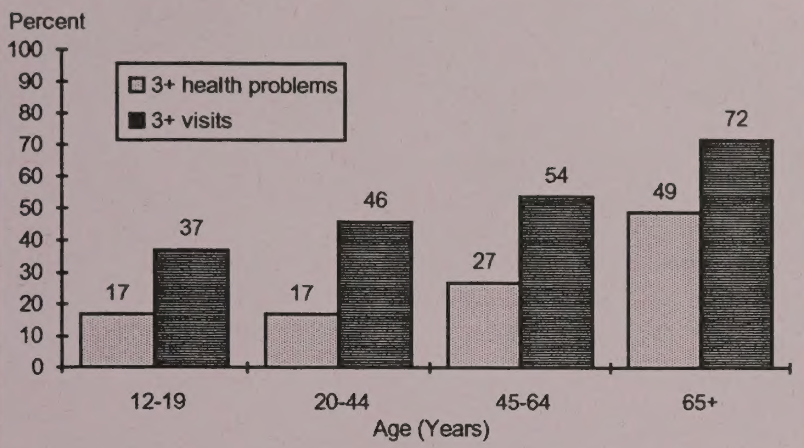
Improper use of medications

Medications can be taken at the wrong times, in the wrong amounts or not at all. This can lead to over- or under-dosage causing additional health problems.[3] It is estimated that only half of the people who are prescribed medication take it properly.[3,4,6] Complying with the instructions of more than one prescription can be difficult when instructions vary for each medication (e.g., when and how to take). Even with pill dispensers, medication diaries, and other reminders, taking three or four medications daily can be very difficult.

Why are seniors taking multiple medications?

As shown in Chart 3, seniors in Hamilton-Wentworth have more health problems and visit health professionals more often than younger individuals. Clearly, medication can provide benefits such as pain relief and independence to many of these seniors. In some situations multiple medications are essential to maintain or improve health. However, health professionals must keep in mind that medications can also lead to problems.[2,3,7]

Chart 3. Percent of Hamilton-Wentworth residents reporting three or more health problems and the percent reporting three or more visits to a doctor* in the last year by age, 1990



*general practitioner or specialist
Source: Ontario Ministry of Health, 1990 Ontario Health Survey, 1992

Can these problems be prevented?

In Hamilton-Wentworth the number of seniors is expected to increase from 60,460 or 13.4% of the population in 1991 to 81,285 or 15.3% of the population in 2011.[1] Many organizations have put forth recommendations concerning medication use for seniors. The recommendations include more conscientious prescribing and monitoring of drugs in elderly people and recognition that any new symptom could be a side effect from current medication.[3,5,7] It has been suggested that 80% of reactions to medication are potentially preventable.[3] Better education for physicians is recommended.[17] Physicians should limit the number of drugs used in long-term therapy. This will reduce the risk of ADRs and improve compliance. There needs to be open communication between all professionals providing care to seniors. Seniors themselves should be encouraged to monitor their own use of medication. We should all remind ourselves that there may not necessarily be a "pill for every ill".

Recommendations of the Canadian Medical Association (CMA) on medication use and the elderly (1993)[7]

- Know the patient. This includes having the patient bring all medications to each office visit for review.
- Consider nonpharmacologic therapy such as diet, exercise and/or community resources.
- Know the drugs. This includes monitoring the patient continually for ADRs.
- Keep drug regimens simple.
- Establish treatment goals. This includes limiting the number of drugs used for long-term therapy to under five.
- Encourage the patients to be responsible medication users. This includes recommending the use of medication reminders and only one pharmacy.

What is being done in Hamilton-Wentworth?

Many organizations in our community are already addressing some of the problems discussed in this ***Infowatch***. The following list of local initiatives is by no means comprehensive.

- Public Health Nurses provide individual assessment and counselling as well as group presentations to seniors regarding safe medication use. For more information call Central Intake, 546-3549.
- Annual Drug and Alcohol Awareness Week takes place the third week in November and is organized by a committee of community volunteers. One activity during the week, Brown Bag Day, is jointly sponsored by the Department of Public Health Services and local pharmacies. Seniors are invited to bring in all their medications to be reviewed by a pharmacist and a public health nurse.
- Drug assessment clinics are available at St. Joseph's and McMaster Hospitals that are run by clinical pharmacologists with experience in dealing with seniors.
- The Educational Centre for Aging and Health at McMaster University and the Hamilton Addiction Research Foundation have sponsored two workshops for local health care practitioners. The ALTERNATIVES program, an educational package focusing on alternatives to medication and alcohol, was introduced.
- The Division of Clinical Pharmacology at McMaster University co-ordinates a twice-yearly continuing education half-day on therapeutics where issues around medication use by seniors are addressed.
- The Pharmacy Medication Monitoring Program is an on-going program run by McMaster University. Prescription users who participate provide information about all prescription drug use, beneficial and adverse drug effects, and quality of life. The data collected will be very useful in assessing everyday medication complications.
- Some local pharmacies are participating in the Ontario Drug Programs Computerized Prescription Network. This network will help to identify dangerous drug interactions and avoid duplication of medications dispensed by different pharmacies. All pharmacies will eventually be part of the Network.

Methods

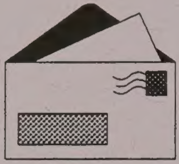
Statistics on medication use were obtained from the 1990 Ontario Health Survey. This household survey provides health-related information on residents of Ontario. The Hamilton-Wentworth sample contained 1,641 individuals and was representative of those aged 12 years and older. There were 187 seniors sampled.

Chart 2 could not be presented using Hamilton-Wentworth data due to small numbers. The numbers of people in younger age groups who take 3 or more medications are too small to report. Therefore, the age associated trend was shown using Ontario data.

For other data presented, methodology and additional details can be found by referring to the original sources.

Now Let's Hear From You

Your comments and suggestions are important to us and are being incorporated into publications from the Health Priorities Analysis Unit like this ***Infowatch***. This issue was developed by Nancy Long of the Department of Public Health Services and Vicki Torrance of the Health Priorities Analysis Unit. Let us know what you think about this issue. Our address and telephone number are:



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The Health Priorities Analysis Unit is sponsored by the Educational Centre for Aging and Health which was established in 1987 with funding from the Ontario Government. Support is also received from the Faculty of Health Sciences, McMaster University and the Hamilton-Wentworth Department of Public Health Services.

Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A service of the Health Priorities Analysis Unit
to inform people about research on health.

April 1995
Volume 8, Number 1

"Breastfeeding Exclusive"

Breastfeeding in Hamilton-Wentworth

What's this issue about?

Exclusive breastfeeding (no other liquids or foods) is recommended for the first four to six months of life by the World Health Organization (WHO),[1] the Canadian Pediatric Society,[2] and the Ontario Public Health Association[3]. Breastfeeding should be continued even after solid foods have been introduced (at four to six months) because the benefits have been demonstrated for the first two years of life.[4] We recognize, however, that breastfeeding may not be possible in all cases and support a woman's decision in this regard. This ***Infowatch*** will present findings from three recent local studies of breastfeeding practices and offer recommendations for the promotion of breastfeeding.

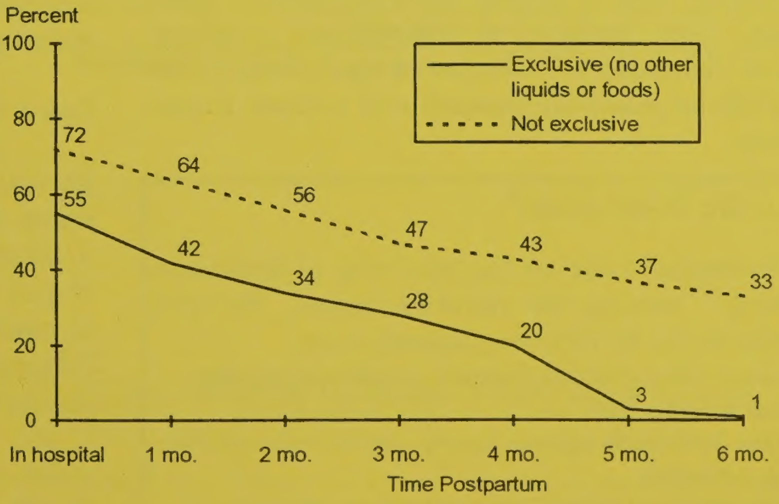
Why promote breastfeeding anyway?

Despite the consensus that "breast is best", the breastfeeding rates have declined in the United States[5] and England[6] in the last ten years. Among the numerous benefits of breastfeeding, research suggests that breastfeeding protects babies from gastrointestinal infections, respiratory illnesses, bacterial and viral infections, ear infections, and allergies.[4,7] In addition, breastfed babies are less likely to develop diseases such as lymphoma, diabetes, and Crohn's disease.[4] Breastfeeding may help to establish bonding between mother and child. Breastfeeding also makes economic sense. For example, the estimated cost of formula feeding for six months in Hamilton-Wentworth in 1992 was $630 for powdered formula and $1300 for ready-to-feed formula.[8]

How many mothers are breastfeeding in Hamilton-Wentworth?

A 1993 survey of 132 randomly selected Hamilton-Wentworth mothers contacted at 6 months postpartum found that 72% (95) had initiated breastfeeding and 43% (57) continued to breastfeed for four months[9] (see Chart 1). This finding is 8% less than the national average for initiation, and is lower than other reported Canadian rates at four months postpartum.[10] Breastfed babies were found to be receiving other liquids while in hospital. Only 76% (72) of mothers who chose to breastfeed were found to be exclusively breastfeeding while in hospital. At three months postpartum, before solids are normally introduced, only 28% of women were exclusively breastfeeding.

Chart 1. Percent of exclusive and not exclusive breastfeeding among 132 mothers in Hamilton-Wentworth from time in hospital to six months postpartum, 1993



Source: Valaitis et al (1994). Infant Feeding Practices in Hamilton-Wentworth.

What types of infant feeding resources were found in Hamilton-Wentworth physicians' offices?

Physicians and other health professionals have an important influence in establishing and maintaining breastfeeding behaviours[11]. Expecting and new mothers are often inundated with pamphlets, magazines and books of varying quality regarding the feeding of infants. A recent survey of physicians' offices in Hamilton-Wentworth (refer to page 4 for methods) found 80 different pamphlets and numerous other promotional materials about infant feeding[12] (Chart 2).

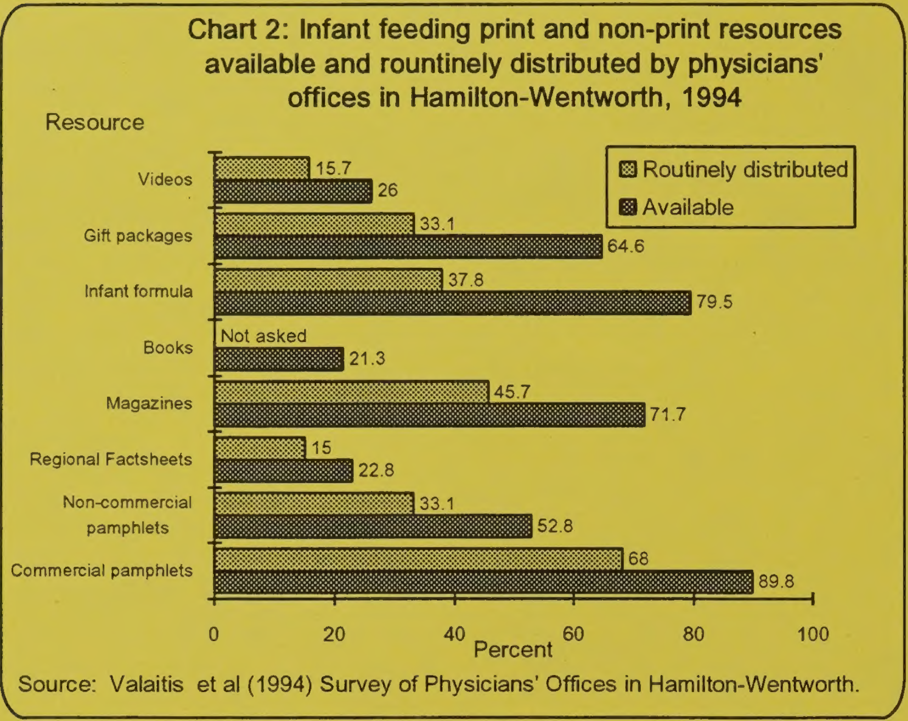


Chart 2: Infant feeding print and non-print resources available and rountinely distributed by physicians' offices in Hamilton-Wentworth, 1994

Source: Valaitis et al (1994) Survey of Physicians' Offices in Hamilton-Wentworth.

Abundant Commercial Pamphlets

Pamphlets produced by infant formula companies and other commercial sources were available from 90% of physicians' offices surveyed and were routinely distributed by 68% of offices. However, most of these pamphlets were portrayed as difficult and contained inaccurate information.[13] These resources violated the WHO Code by promoting products with pictures of cans of formula.

What is the WHO Code?

The International Code for the Marketing of Breastmilk Substitutes[14] contains ten recommendations. The four most relevant for the following discussion are:

1. **No advertising of infant formula, pacifiers or feeding bottles to the public.**
2. **No free formula to parents unless supplies can continue for 4-6 months.**
3. **No promotion of infant feeding products (eg. notepads, booklets, posters, display(s)) in health care facilities.**
4. **No words or pictures idealizing artificial feeding, including pictures of infants, on labels of products.**

The WHO Code is available from the Infant Feeding Action Coalition of Canada (INFACT Canada) 416/595-9819.

Fewer Non-Commercial Pamphlets

Pamphlets produced by government agencies and breastfeeding support groups were less likely to be available in physicians' offices (53%) or routinely distributed (33%) than were their commercially produced counterparts. Some of these were older pamphlets (>10 years) and contained inaccurate information. A new series of seven breastfeeding factsheets produced by a regional lactation committee was, however, available in 23% of offices.

Offices Accept Free Formula

Most offices surveyed reported having accepted free infant formula (80%) and gift packs (65%) from formula companies and about half of these offices routinely handed out these items to mothers. This activity has been shown to reduce the duration of breastfeeding[15] and violates the WHO Code. It was found that 16% of offices routinely distributed the Ross "For the Breastfeeding Mother"[16] and "Baby's Early Months"[17] videos, which contain packages of powdered formula inside video jackets.

Magazines Advertise Bottles and Pacifiers

Fourteen distinct magazines were available in 72% of offices surveyed, and were routinely distributed by 46% of offices. The magazines "Parenting", "Expecting" and "Best Wishes" were the most common. These and other magazines extensively advertise infant foods, baby bottles and pacifiers, again violating the WHO Code.

Policy on Breastfeeding Resources

The findings from this survey also revealed that physicians were the most likely staff member to decide which resources to stock (83%), to hand out these materials (81%) and to order stock (34%). Registered Nurses with diplomas were the next most likely group to select, distribute and order resource materials, followed by medical secretaries. In 10% of the offices surveyed, no one ordered resource materials. Only 20% of the offices surveyed reported having a policy to decide which infant feeding materials and products should be made available. Of the few offices that reported having a policy, important criteria included the promotion of breastfeeding, limited advertising, readability and physician approval.

Evaluation of breastfeeding information

In 1991, the quality of 22 different pamphlets on infant feeding distributed in Hamilton-Wentworth was assessed.[13] To be considered satisfactory for breastfeeding mothers, these materials had to be:

- easy to read (written at a Grade 5-8 reading level)
- contain accurate information
- portray breastfeeding as positive
- comply with the WHO Code[14]

Each pamphlet was rated independently by two investigators using a five point scale for these criteria. The findings revealed that none of the pamphlets, either from commercial or non-commercial sources, met all four criteria.[13]

The above finding prompted a group of Hamilton-Wentworth health professionals and consumers interested in promoting breastfeeding to obtain funds from the Ontario Ministry of Health to develop a series of breastfeeding factsheets. Seven factsheets were designed to address the most common questions and problems experienced by breastfeeding mothers. These and other recommended breastfeeding promotion resources are listed in Table 1.

Recommendations for selecting breastfeeding promotion resources

1. Review with staff the WHO code for the marketing of breastmilk substitutes which is endorsed by the OMA[18] and understand the impact that distributing commercial products has on expecting and new mothers. Have a written policy based on these discussions.

2. Designate someone in your organization to decide which materials and products should be made available, based on your office policy. This task includes a critical review of all printed materials distributed to mothers. Ideally, each magazine issue should be reviewed, as the content varies from one issue to the next.

3. Search out materials produced by government and reputable non-profit organizations. These materials are much less likely to contain negative messages or violate the WHO code.

4. Contact the Department of Public Health Services for services and information about other community services related to infant feeding:
   - Public Health Nursing: home visits (905/546-3550)
   - The Parent-Child Information Line (905/546-3618)
   - Nutrition Promotion Program (905/546-3630)

Table 1. Pamphlets Available Upon Request*

Pamphlet Title	Developed By
Breastfeeding Factsheets •Breastfeeding Feels Good •Breastfeeding is Easy to Learn •Breastfeeding Doesn't Have to Change the Way You Eat •Breastfeeding When Away From Your Baby •Breastfeeding After Six Months •Breastfeeding Your Twins •Breastfeeding Your Premature Baby	Hamilton-Wentworth Regional Lactation Committee
Feeding Your Baby - Baby's Best Start	Hamilton-Wentworth Department of Public Health Services
10 Great Reasons to Breastfeed 10 Valuable Tips for Successful Breastfeeding	Health Canada

**All pamphlets available from the Hamilton-Wentworth Department of Public Health Services, Nutrition Resource Centre, 905/546-3521.*

Survey Methods

Infant Feeding Practices in Hamilton-Wentworth: A retrospective survey of breastfeeding behaviour among postpartum mothers was conducted in 1993.[9] Every sixth mother recorded by the Ontario Notification of Live Birth Record was contacted by telephone at 6 months postpartum to ascertain their infant's feeding history.

In 1993, a survey funded by the Ontario Ministry of Health, Teaching Health Unit Project, was designed, pretested and mailed to 660 physicians in the Region by the Hamilton-Wentworth Department of Public Health Services. An introductory letter was sent to each physician from the Medical Officer of Health followed one week later by a questionnaire. Approximately two weeks later, a reminder card was mailed, followed again two weeks later by a second questionnaire. All general practitioners, pediatricians and obstetricians/gynecologists listed in the Ontario Medical Directory (Hamilton, Ancaster, Dundas and Stoney Creek) were included in the survey. Attempts were made to redirect questionnaires to relocated physicians. Physicians were asked to identify all breastfeeding resources they had available and those which were routinely distributed to expecting and new mothers. Physicians who did not see expecting or new mothers, or who were not in office practices, were asked to return their questionnaires and were excluded from the study. Additional ineligibility criteria included: the physician had relocated outside the Region, had retired or died. Only one response was eligible from each group practice since the focus of this study was on information resources available in physicians' offices. Of the 336 thought to be eligible office practices, 127 (38%) completed and returned the survey. Since the true number of eligible practices was not known and some of these 336 practices are likely to be group practices, the response rate could be higher than 38%. However, caution is warranted in generalizing the results of this survey to all physicians in the Region.

Now Let's Hear From You

Your comments and suggestions are important to us and are being incorporated into publications from the Health Priorities Analysis Unit (HPAU) like this ***Infowatch***. This ***Infowatch*** was developed by Ruta Valaitis and Judy Sheeshka of the Department of Public Health Services, a Teaching Health Unit of McMaster and Guelph Universities, and Lenore Dickson of HPAU. Our address and telephone number are:

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Infowatch is a newsletter of the Health Priorities Analysis Unit, and is published when new data are available. It describes health and social data similar to that found in the **Fact Book on Health in Hamilton-Wentworth** (1994).

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The Health Priorities Analysis Unit is sponsored by the Educational Centre for Aging and Health which was established in 1987 from the Ontario Government. Support is also received from the Faculty of Health Sciences, McMaster University, and the Hamilton-Wentworth Department of Public Health Services.

Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

*A Service of the Health Priorities Analysis Unit
to inform people about research on health*

July 1995
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Who Cares? Long-Term Care

in Hamilton-Wentworth

What's this issue about?

Although most people in our community live independently, there are a few who receive various forms of assistance from others. Health Canada defines long-term care (LTC) as care provided to "...an individual who for one reason or another has never developed, or has lost the capacity for self-care to such a degree that support or intervention will be needed for an indefinite period".[1] Individuals may be in need of LTC at home, at school, at work and during recreation, while some may need supportive accommodations. LTC, including health promotion and health care, is provided to elderly persons, children and adults with physical disabilities, persons with chronic health problems and others in need. This ***Infowatch*** will describe current LTC issues in Hamilton-Wentworth and will identify some of the challenges to be met in reorganizing LTC services.

Who needs long-term care?

Circumstances and conditions vary widely for those who need LTC. An individual may have trouble with one or many of the activities of daily living (such as housekeeping, preparing meals, bathing or dressing) or have trouble getting around outside of their home.

Table 1 shows the number of people in Hamilton-Wentworth who live at home but have physical or mental limitations as estimated from the Ontario Health Survey, the most recent data available.[2] These numbers represent people of all ages, thus, LTC services are needed for both persons 65 years of age and over and for younger persons, even children.

Overall, 10% (37,400) of the residents in Hamilton-Wentworth under the age of 65 have at least one of the physical limitations described in Table 1. In contrast, 31% (18,000) of those residents age 65 and over have at least one of the physical limitations.[2]

Table 1: Estimated Number of Hamilton-Wentworth Residents[1] Living at Home with Physical or Mental Limitations, 1990

		Estimated Number in Hamilton-Wentworth
Physical Limitations		
	Sensory (Vision, Hearing, or Speaking): not able to see adequately[2] even with glasses or contact lenses; or not able to hear adequately[3] even with a hearing aid; or not able to be understood completely when speaking with strangers.	11,900
	Getting Around: not able to walk around the neighbourhood without difficulty and without mechanical support such as braces, cane or crutches.	11,700
	Hands and Fingers: does not have the full use of two hands and ten fingers.	4,100[4]
	Pain and Discomfort: has pain and discomfort which prevents at least a few activities.	40,700
Mental Limitations		
	Feelings: usually unhappy[5].	11,000
	Memory: usually forgetful[6].	49,200
	Thinking: usually has difficulty[7] when trying to think or solve problems.	19,000

1 Data collected for residents age 6 and over. Total population in Hamilton-Wentworth age 6 and over = 401,900.
2 See adequately = read newsprint and recognize a friend on the other side of the street.
3 Hear adequately = hear a group conversation with at least three other people and a conversation with one other person in a quiet room.
4 Based on small numbers, therefore this estimate is not reliable.
5 Reported being usually "somewhat unhappy," "unhappy with little interest in life" or "so unhappy that life is not worthwhile."
6 Reported usual ability to remember things as "somewhat forgetful," "very forgetful" or "unable to remember anything at all."
7 Reported "a little difficulty...," "some difficulty...," "a great deal of difficulty..." or "unable to think or solve any problems."

Source: Ontario Ministry of Health, 1990 Ontario Health Survey, 1992.

However, when residents were asked to compare themselves to others of the same age only 7% (27,000) of those under the age of 65 and only 19% (11,000) of those age 65 and over felt limited in their activities because of a long-term condition.[2]

Who provides long-term care?

LTC in our community is mainly provided by families and friends. In Hamilton-Wentworth, 86% of adults report having someone they can confide in or talk to freely about their problems. In a time of need, 93% of adults have someone who can help them.[2] These close contacts are the most common providers of LTC when and if it is ever needed.

Hamilton-Wentworth agencies, including family physicians, provide a wide range of services for both clients and their care providers. When living at home becomes too difficult, these services can be brought into the home. Occasionally an individual may choose to move into supportive accommodation.

How do people access long-term care when they need additional assistance?

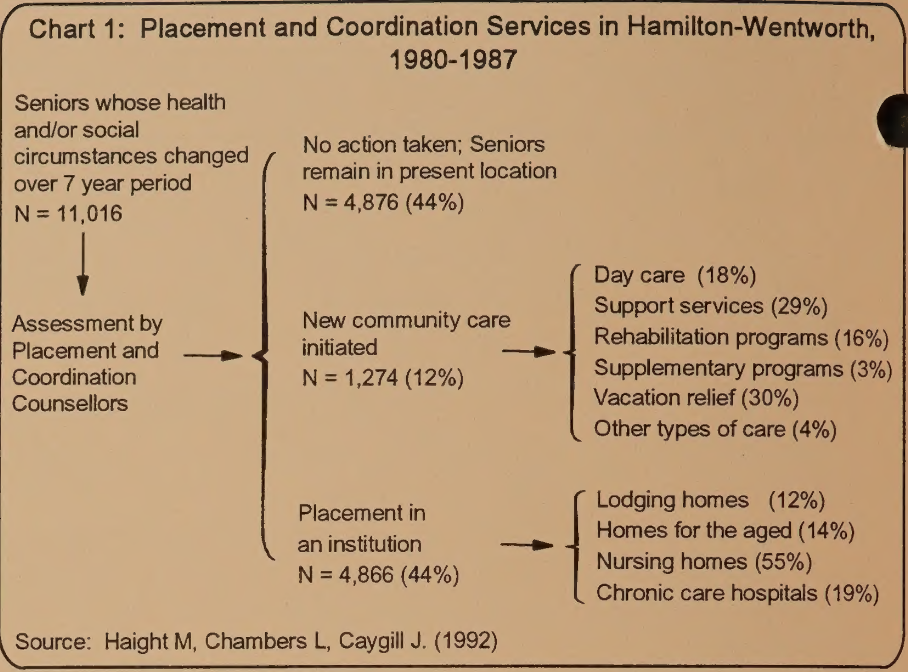
Family physicians, public health nurses, social workers and other health care providers (see The Directory of Community Services - "The Red Book"[3]) provide information and advice on LTC services.

Access to LTC facilities can be obtained through the Placement and Coordination Service (PCS). The objective of PCS is to simplify access to LTC facilities for the consumer. PCS is one agency that identifies seniors and others in need of care and matches these individuals to services or facilities. A study analyzed the service outcomes for seniors assessed by the Hamilton-Wentworth PCS over a 7 year period (Chart 1).[4]

How are long-term care needs matched to services available in the community?

The availability of LTC services in Hamilton-Wentworth is determined by many factors. The number of people in need of the services is, unfortunately, not usually known. Also, the development of services depends on the capacity of agencies and facilities to adapt to changing needs and technology, political shifts in decision-making power and funding availability.[5]

Chart 1: Placement and Coordination Services in Hamilton-Wentworth, 1980-1987


Seniors whose health and/or social circumstances changed over 7 year period
N = 11,016
Assessment by Placement and Coordination Counsellors
No action taken; Seniors remain in present location
N = 4,876 (44%)
New community care initiated
N = 1,274 (12%)
Day care (18%)
Support services (29%)
Rehabilitation programs (16%)
Supplementary programs (3%)
Vacation relief (30%)
Other types of care (4%)
Placement in an institution
N = 4,866 (44%)
Lodging homes (12%)
Homes for the aged (14%)
Nursing homes (55%)
Chronic care hospitals (19%)

Source: Haight M, Chambers L, Caygill J. (1992)

Table 2: Some At-Home Long-Term Care Services in Hamilton-Wentworth (April 1994 - March 1995)

Types of Services	Total Number of Referrals
Acute and Chronic Home Care Program[1]	20,077
	Number of Visits
Nursing	368,712
Physiotherapy	23,016
Occupational Therapy	15,995
Social Work	7,600
Nutrition Therapy	3,056
Speech Therapy	1,122
	Number of hours
Homemaking	666,660
Home Support	**Total Clients**
VON Meals on Wheels[2]	1,790
Other Meals on Wheels Programs[3]	143
DARTS[4]	13,911
VON Volunteer Visiting Program[5]	2,006
Other Transportation and Friendly Visiting Programs[3]	1,677

Physician Home Visits

Many local area hospitals have outreach programs that involve physician visits to the homes of those in need of LTC and many family physicians also make home visits to those in need.

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[1] Source: Victorian Order of Nurses (VON), Hamilton-Wentworth Home Care Program; Contact: E. Jane Worral, May 25, 1995.

[2] Source: Victorian Order of Nurses (VON), Meals On Wheels for Hamilton and Stoney Creek; Contact: Mae Radford, June 1, 1995

[3] These numbers are estimates based on phone calls to community agencies. Other agencies may also provide these services.

[4] Source: Disabled and Aged Regional Transit System, Hamilton-Wentworth; Contact: Gail Ryan, June 27, 1995.

[5] Source: Victorian Order of Nurses (VON), Volunteer Visiting Program; Contact: Carol Stonehouse, April 21, 1995.

What community long-term care services are available in Hamilton-Wentworth?

The Hamilton-Wentworth Home Care Program coordinates and provides health and support services in the homes of Hamilton-Wentworth citizens in need. This may include individuals with acute or chronic problems or those recently released from hospital. Forty-five percent of persons referred to "Acute" and "Chronic" Home Care in the fiscal year 1994-95 were under the age of 65.[6] Table 2 shows characteristics of some LTC services in Hamilton-Wentworth.

Many other LTC services are offered in Hamilton-Wentworth. Some physicians routinely visit those who need LTC at home. In addition, there are caregiver support programs, respite care, security checks, home maintenance, adult day programs, community programs for those with Alzheimer's disease, elderly person's centres and senior volunteer services. Information about these services is found in "The Red Book".[3]

What accommodations are available for people in need of long-term care?

The majority of people with limitations live in their own homes. Some people modify their homes to make living easier. Hamilton-Wentworth has a continuum of accommodations for people whose LTC needs cannot be met if they continued to live in their own private homes. Table 3 summarizes the number of accommodations and capacity by type in Hamilton-Wentworth.

Table 3: Continuum of Supportive Accommodations in Hamilton-Wentworth

Living in Private Houses and Apartments (1990)	**Number of Residents**
People Under 65 With Physical Limitations[1] (Total population of people age 6 to 64 = 343,300)	37,400
People 65 and Older With Physical Limitations[1] (Total population of people age 65 and over = 58,600)	18,000

Types of Supportive Accommodation (1995)	**Number of Facilities**	**Capacity (Residents)[2]**
Non-Profit Buildings for Seniors[3] (includes buildings with accessible units for seniors)	41	4,057
Accessible Housing for people with physical disabilities[4] (includes buildings with accessible units for families and singles/couples, units for persons requiring attendant care services and units for persons who are hearing impaired and persons who are visually impaired)	85	not available
Second Level Lodging Homes[5] (long-term care and assistance with activities of daily living, including meals)	84	2,161
Nursing Homes and Homes for the Aged[6] (includes nursing care and called LTC facilities by the Ministry of Health)	18	2,440
Chronic Care in Hospitals[7] (includes heavy nursing care and long-term care for young disabled)	6	491

1 Those with at least one of the physical limitations listed in Table 1 of this ***Infowatch***. Source: Ontario Ministry of Health, 1990 Ontario Health Survey, 1992.
2 Not all these accommodations are filled to capacity at any one time.
3 Source: Housing Help Centre. Information on Seniors Housing, 1995 and Hamilton-Wentworth Accessible Housing Resources, 1994.
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5 Source:, Hamilton-Wentworth Department of Public Health Services; Contact: . Diane Nelson, May 30, 1995.
6 Source: Long-Term Care Area Office; Contact: Bob Pond, May 26, 1995.
7 Source: based on phone calls to local area hospitals.

How many people are waiting for admission to facilities?

The Placement Coordination Service of Hamilton-Wentworth reports that there were 836 persons waiting for nursing home, home for the aged and chronic care hospital placement at the beginning of April 1995.[7] Many of those are likely recipients of LTC home services while waiting for placement.

What does the future hold for Hamilton-Wentworth?

The District Health Councils of Ontario are responsible for planning the reform of LTC. The LTC committee of the Hamilton-Wentworth District Health Council is working in conjunction with the community to improve local LTC service delivery.[8] Challenges for LTC reform in Hamilton-Wentworth include:

- Bringing together both health and social LTC services;
- Improving service coordination;
- Basing LTC services on population and health needs;
- Providing home health care and health promotion alternatives to LTC facilities;
- Ensuring greater consumer participation and control of services;
- Providing equitable and high quality service across the Region;
- Respecting the rights and security of consumers and service workers;
- Promoting health and preventing disease among those in need of LTC.

What are some recent long-term care initiatives in Hamilton-Wentworth?

- Support programs for caregivers of people with Alzheimer's disease;
- School health services from the Home Care Program of Hamilton-Wentworth;
- Rehabilitation services for infants and children at home who are disabled;
- The Hamilton-Wentworth Task Force on Elder Abuse and Self-Neglect is a group of service providers and consumers aiming to improve our community's response to prevent and deal with Elder Abuse;
- Studies, planning and pilot projects on supportive housing for seniors and people with disabilities;
- Providers of Volunteer-Assisted Transportation Group consisting of many community agencies to explore areas for collaboration and co-operative initiatives in volunteer-assisted transportation services in the Region;
- Senior Citizens Safety Committee of the Trauma Prevention Council focusing on "prevention through to intervention."

For more information on these or other LTC initiatives in our community refer to "The Red Book"[3] (528-0104) or contact the Long-Term Care Committee of the Hamilton-Wentworth District Health Council (570-1441).

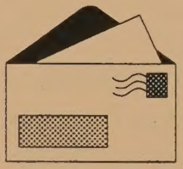
Methods

Information on residents with physical and mental limitations given in Table 1 was obtained from the 1990 Ontario Health Survey. This household survey provided health-related information on residents of Ontario. The Hamilton-Wentworth sample contained 1,641 individuals and was representative of those aged 12 and older.

Many service agencies in Hamilton-Wentworth were contacted to obtain the data compiled in Table 2 of this Infowatch. The agencies contacted included: VON Hamilton-Wentworth; Ancaster Meals on Wheels; Canadian Red Cross Society; Glanbrook Home Support Programme Inc.; Meals on Wheels Dundas; Canadian Cancer Society; Disabled and Aged Regional Transit System; Dundas Community Services; Family Services of Hamilton-Wentworth Inc.; St. Matthew's House; Wesley Urban Ministries.

Now Let's Hear From You

Your comments and suggestions are important to us and are being incorporated into publications from the Health Priorities Analysis Unit like this *Infowatch*. Let us know what you think about this issue. The contact person for this *Infowatch* is Vicki Torrance. Our address and telephone number are:



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The Health Priorities Analysis Unit is sponsored by the Educational Centre for Aging and Health which was established in 1987 with funding from the Ontario Government. Support is also received from the Faculty of Health Sciences of McMaster University, the Hamilton-Wentworth Department of Public Health Services and the Hamilton-Wentworth District Health Council.

Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A Service of the Health Priorities Analysis Unit
to inform people about research on health

October 1995
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Not Born in Canada?

How's your Health in Hamilton-Wentworth?

What's this issue about?

This issue of ***Infowatch*** is about the health of Hamilton-Wentworth immigrants, that is, persons who were not born in Canada. With 24% of all residents being immigrants, Hamilton places third in Canada behind Toronto (38%) and Vancouver (30%).[1] Health is defined here as more than the absence of illness or access to health care, it is a key resource to achieve the quality of life desired by an individual. Health is affected by an individual's physical and social environment and personal behaviour.[2,3]

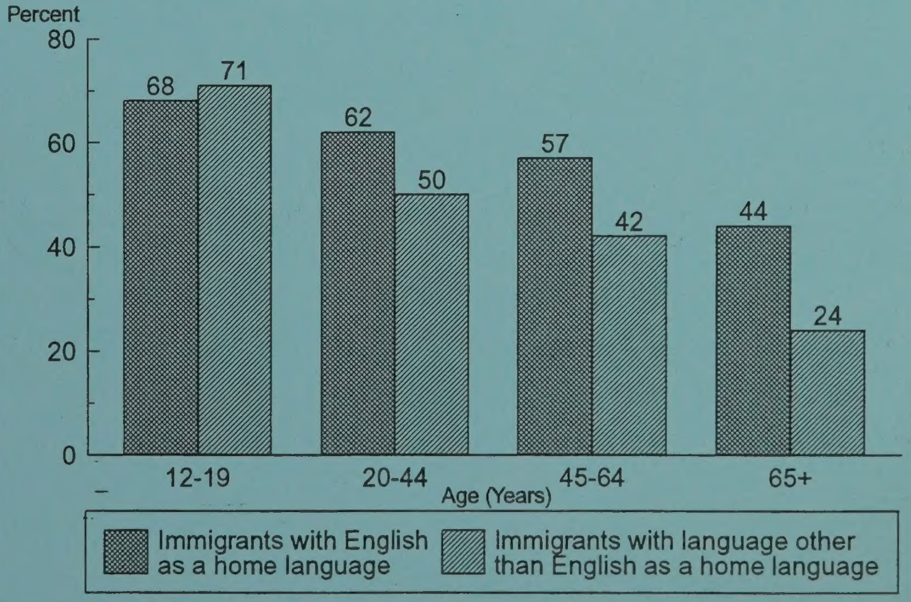
Do non-English speaking immigrants have poorer health in Hamilton-Wentworth?

Research has shown that although self-perceived health is a subjective health status measure, it is "strongly associated with a person's objective physical and mental health status" irrespective of cultural group.[4] According to the 1990 Ontario Health Survey[5] 60% of Canadian-born residents and 57% of English speaking immigrants in Hamilton-Wentworth report excellent or very good health. However, only 40% of non-English speaking immigrants report excellent or very good health. There is an association between reported health status and age as shown in Chart 1 for immigrants living in Ontario. Older groups (immigrant and Canadian-born) less frequently report excellent or very good health status. Immigrants in Ontario who do not speak English at home report excellent or very good health status less often than those who report speaking English at home. This difference is larger in older age groups (Chart 1).

Why do immigrants who do not speak English feel less well?

Our living and working environment, income, education, social support and behaviour can affect our health.[2,3] Immigrants who do not speak English at home have lower levels of income and education than those that do speak English (Chart 2) and Canadian-born residents (not shown). However, these same immigrants who do not speak English at home also do not smoke or drink as much as other residents.[5]

Chart 1: Percent of Ontario immigrants reporting their health as excellent or very good, by home language and age, 1990



Source: Ontario Ministry of Health, 1990 Ontario Health Survey, 1992.

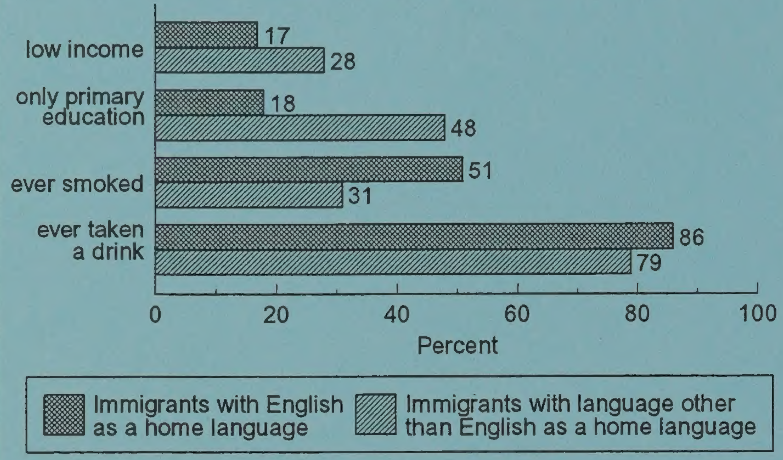


Chart 2: Prevalence of some factors affecting the health of Hamilton-Wentworth immigrants by home language, 1991.

Source: Ontario Ministry of Health, 1990 Ontario Health Survey, 1992.

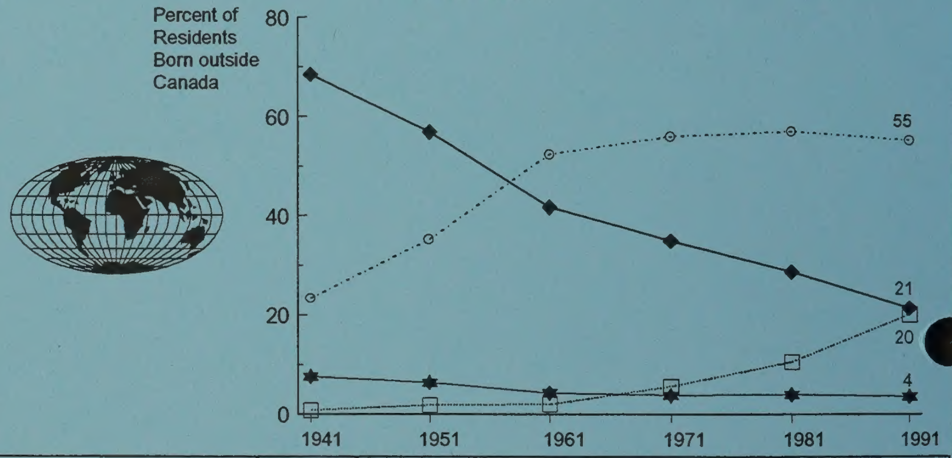
Who are the immigrants in Hamilton-Wentworth?

According to 1991 census data, Hamilton-Wentworth is home to 108,715 immigrants (24% of the region's population).[7] Chart 4 shows the trends in immigration for Hamilton-Wentworth over the past 50 years.[8] The percent of immigrants from the United Kingdom has declined from 68% in 1941 to 21% in 1991. Other European immigrants have increased from 23% in 1941 to 55% of immigrants in Hamilton-Wentworth in 1991. The recent increase in Asian newcomers accounts for the increase in the "other" category (20% in 1991) (Chart 4).[7,9,10]

Language

Being able to speak the commonly used language in the community is a key factor in the adjustment and quality of life of immigrants and may have a large impact on health.[6] Although English is the predominant language in our community, 11% of all residents report speaking a single language other than English at home and another 2% report speaking multiple languages at home.[7] Overall, 2% of the population has absolutely no knowledge of English.[7] For those who do not speak English at home the most common languages are Italian (23%), Polish (10%) and Pourtuguese (10%) (Chart 3). However, it can be seen that Hamilton-Wentworth has a large variety of language groups.

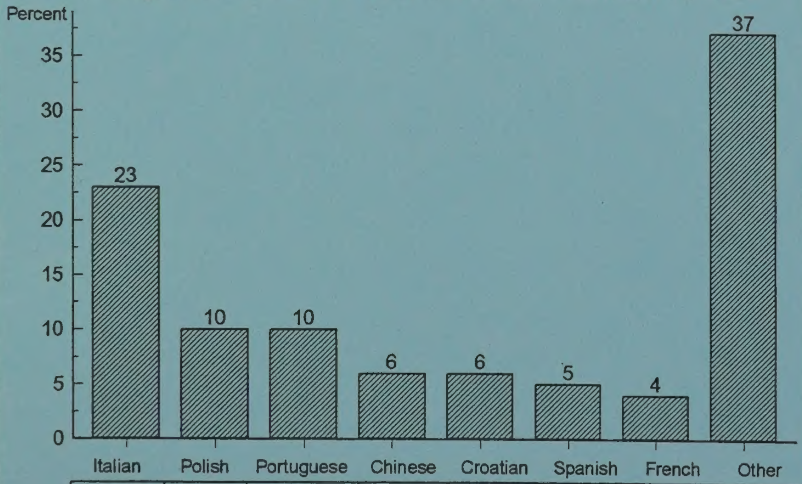
Chart 4: Hamilton-Wentworth Residents born outside Canada by Birthplace, 1941-1991



	1941	1951	1961	1971	1981	1991
United Kingdom ◆	40,657	39,709	42,553	38,925	31,585	23,190
Other Europe ⊖	13,869	24,616	53,392	62,225	62,450	59,905
United States ✱	4,478	4,427	4,341	4,220	4,345	3,820
Other ⊟	431	1,248	1,978	6,200	11,550	21,800
Total Immigrants	59,435	70,000	102,264	111,565	109,930	108,715
Total Population	206,721	266,083	358,837	401,885	411,445	446,680
Immigrants as percent of total	28.8	26.3	28.5	27.8	26.7	24.3

Source: Census data. Statistics Canada, 1941 to 1991

Chart 3: Percent of individuals speaking a language other than English most often at home in Hamilton-Wentworth, 1991



Italian	Polish	Portuguese	Chinese	Croatian	Spanish	French	Other
11,120	4,730	4,660	2,940	2,750	2,525	1,905	18,365

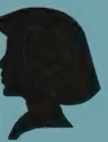
Source: Census data. Statistics Canada, 1991.

What are the special needs of immigrants?

Refugees

One class of immigrants is the Refugee Class. A refugee is an individual who, due to race, religion, nationality, membership in a particular social group or political opinion, has a well-founded fear of persecution in his or her country, and is thus unwilling or unable to return.[11] In contrast to other immigrants, refugees are forced to migrate rather than choosing to leave their homes.[11,12,13,14,15] They often have little personal property or assets and have lost or left family behind. These experiences can severely affect the physical and mental well-being of refugees.[12,14,15]

Women



Immigrant women are less likely to speak English than immigrant men.[11] Child care and other responsibilities in the home tend to lessen their opportunities to learn English.[11,12,14,16,17] Language barriers limit the choices of paid work and inhibit the development of a support network to replace the family they have left. This can lead to increased dependence upon the men in their families. Immigrant women may become more susceptible to abuse.[11,16,18] Women who have immigrated as "dependent spouses" may be under the misconception that leaving their husband would result in deportation.[11]

Children

Children can face increased health risks when they immigrate. Stress results from difficulty adapting to Canadian society. At school, children may be faced with language difficulties, racism and drastic changes in the type of education they receive.[11,14] They may choose to reject their parents culture, which Canadian society may devalue, while being faced with discrimination.[11] Socio-economic status is another health risk and 31% of immigrant children in Canada live in low-income families, as opposed to 19% of other Canadian children.[19]

Seniors

Seniors who are new immigrants may have spent most of their lives in one culture, making it more difficult to adapt to a new culture. Elders are highly respected in many cultures and this is reflected in family relations, traditions and even living arrangements. It can be difficult for senior immigrants to adjust to losing status when they move to Canada.[11,14] Older immigrants are less likely to speak English, are less likely to be married, have fewer years of education and have lower income than their younger counterparts.[11] As well, they are more likely to be unhappy, isolated and less able to use social services without culturally sensitive assistance.[11,19] However, if senior immigrants belong to a close ethnic community while in Canada, the social support may act as a "buffer" to prevent health problems in the aging process.[20]

What are the barriers to access health and social services for immigrants?

Studies in Hamilton-Wentworth have identified barriers preventing immigrants from using health and social services.[12,15] The barriers can include: **information barriers** (lack of knowledge of available services, information available only in printed English, inadequate links between service agencies); **socio-cultural barriers** (confusion about the role of different helping professionals, services not always culturally appropriate, stigma attached to illnesses prevents people from seeking services, staff and agency planning committees do not reflect diversity of clientele); **other barriers** (feeling uncertain and powerless when dealing with agencies, information about services provided mainly by family and friends, insecurity about language skills or accent prevents people from seeking services, agencies which serve specific cultures are often poorly funded.)[12]

What can be done to improve the accessibility of health and social services to immigrants?

- increase sensitivity and awareness of the public and service providers
- provide specifically trained, culturally aware, paid interpreters in social/health care system
- produce pamphlets in several languages listing services and contacts at Ontario entry points
- provide English as a second language classes with daycare, available to everyone, not just those entering the workforce
- membership on governing bodies of agencies should reflect the cultural diversity of the community that they serve
- license social/health service practitioners who have immigrated to provide traditional and alternative services
- increase integration between culturally specific and generic agencies.[11,12,14,15]

What is being done for immigrants and refugees in Hamilton Wentworth?

- Ecumenical Support Committee for Refugees (523-6361)
- St. Joseph's Immigrant Women's Centre (529-5209).
- Ontario Welcome House (521-7569) (until March 31, 1996)
- Interfaith Council for Human Rights, Refugees and Immigration - Operation Lifeline (523-4031)
- Salvation Army - Canadian and Refugee Program (525-4076)
- Wesley Urban Ministries, Kirkendall-Strathcona Neighbourhood House (528-8485)
- Circle of Friends (529-1840)
- Office for Refugees and Immigration of the Diocese of Hamilton (528-7988)
- Hamilton Urban Core Community Health Centre (522-3233)

For more information on these or other community services refer to "The Red Book" (528-0104).[21]

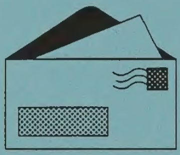
Methods

Information on the health of immigrants was obtained from the 1990 Ontario Health Survey. This household survey included a Hamilton-Wentworth sample containing 1,641 individuals and was representative of those aged 12 years and older. Questionnaires were available in English, French, Italian, Portuguese and Chinese. However, 3.3% of the intended sample did not respond due to language barriers or other reasons. Therefore, this data could be bias[illegible] because those experiencing the most difficulty with language may not have been included. To determine self-perceived health status, the survey asked: "In general, compared to other persons your age, would you say your health is excellent, very good, good, fair or poor?"[5]

The census is conducted by Statistics Canada, and provides demographic information. Part B of the 1991 census, which is used to determine the place of birth and home language of Hamilton-Wentworth residents, was based on a 62,983 person (20% of households) sample of the entire Hamilton-Wentworth population.[7]

Now Let's Hear From You

Your comments and suggestions are important to us and are being incorporated into publications from the Health Priorities Analysis Unit like this *Infowatch*. Let us know what you think about this issue. The contact person for this Infowatch is Vicki Torrance. Our address and telephone number are:



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Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A Service of the Health Priorities Analysis Unit
to inform people about research on health

February 1996
Volume 9, Number 1

Violence Against Women in Hamilton-Wentworth

What's this issue about?

According to a 1993 survey by Statistics Canada, male violence against women is a serious social problem in Canada.[1,2] Violence takes many forms and includes physical abuse such as hitting, pushing, grabbing, forced sexual acts and sexual harassment.[3,4] Violence also encompasses psychological abuse which includes verbal threats and insults, harassment by phone or letter, forced isolation from family, neighbours, friends and control of financial resources.[3] According to the Violence Against Women Survey, about 30% of ever-married women living in the Hamilton census metropolitan area (i.e., Ancaster, Dundas, Flamborough, Glanbrook, Hamilton, Stoney Creek, Burlington and Grimsby) at the time of the survey had experienced either physical or sexual abuse by a spouse or common-law partner since the age of 16.[1] Research also shows that three in four women who report physical or sexual abuse by a partner also report verbal and emotional abuse.[5,6] This ***Infowatch*** focuses on violence against women in Hamilton-Wentworth documenting the risk to health that violence represents.

Who are the victims and perpetrators of violence?

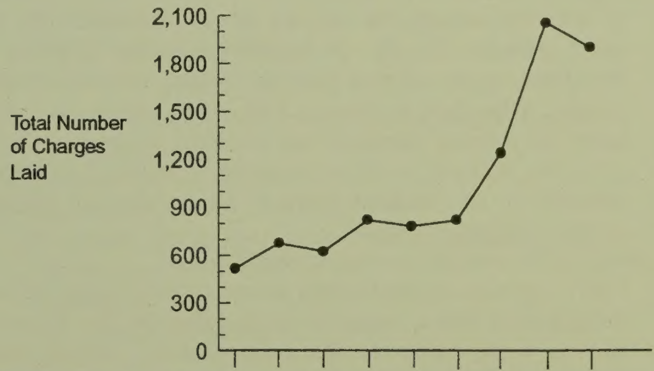
Women of all ages, cultures, races, religions, socio-economic and educational levels may experience violence.[7] Violence may occur anywhere including private homes, workplaces, public establishments, institutions and on the streets.[4] Violent acts may be committed by spouses, relatives, boyfriends, friends, acquaintances, co-workers and strangers. However, more female victims experience violence by known men (50%) than by a stranger (25%).[1] Approximately 25% of victims experience violence by both strangers and men known to them.[1]

Hamilton-Wentworth Police enforce spousal assault charging policy

In Hamilton-Wentworth, the total number of reported spousal assault incidents rose from more than 900 in 1986 to over 1,400 in each of the past three years (from 1992 to 1994) (data not shown).[8]

Since 1991, there has been a dramatic increase in all types of male charges related to spousal assault (Chart 1).[8] This increase in the number of charges for reported incidents is largely due to a change in police policy which removed the responsibility for laying charges from victims.[9] In the early 1980s, mandatory domestic assault charging policies were initiated across Canada to increase charging by the police.[5] Beginning in 1991, a police report was submitted with every call of domestic violence and charges were laid when reasonable grounds were present.[9] This accounts for most of the increase shown in Chart 1.

Chart 1: Total Number of Male Charges Related to Spousal* Assault by Type of Charge(s) Laid**, 1986-1994



Year	1986	1987	1988	1989	1990	1991	1992	1993	1994	Total
Assault	443	544	520	634	595	590	776	1,007	881	5,990
Assault with weapon/bodily harm	40	82	59	111	88	71	112	168	155	886
Threatening	30	43	36	32	36	61	220	408	398	1,264
Other	4	7	9	45	64	100	133	475	469	1,306
Total ●	517	676	624	822	783	822	1,241	2,058	1,903	9,446

***Spousal** refers to married, common-law, boyfriend/girlfriend, and estranged couple relationships.

**Refer to Table 1 for definition of charges.

According to the 1991 census, the total number of males 16 years of age and over in Hamilton-Wentworth was 172,215.

Source: Hamilton-Wentworth Regional Police Services, 1995.

In any incident of spousal assault, multiple charges may be laid. Of the 10,117 spousal assault charges laid between 1986 and 1994 by the Hamilton-Wentworth Police, 9,446 (or 93%) were laid against males (Chart 1). In fact, 93% of charges related to domestic violence in Ontario are laid against men.[7] Most charges laid against women are counter charges laid by assaultive partners or stem from acts of self defense.[7] For all years, the majority of the charges laid were "*assault*" charges (See definitions in Table 1).

How many women experience violence in Hamilton-Wentworth?

Between 1990 and 1994 there were 14,259 reported female victims of violent crime in Hamilton-Wentworth or about 2,852 victims each year (Table 2). However, this number may be an overestimate since the same victim may have suffered from several incidents over this period of time. Each incident may include more than one type of crime. When this occurs, only the most serious crime is reported (in this table) for each incident. Table 2 also does not represent the number of charges laid since each criminal incident may not result in a charge.

What are the barriers to reporting violence?

It is known that a large proportion of criminal incidents are not reported to the police.[5] In the Violence Against Women Survey only 14% of all violent incidents were reported to the authorities.[1] Barriers to reporting may include: **information barriers** (thinking the police cannot help; believing there are expensive court costs to reporting when in fact there are no costs; believing incorrectly that they may have caused the violence); **sociocultural barriers** (viewing the incident as too minor; wanting to keep the incident private; shame and embarrassment; not wanting or needing help); and **other barriers** (not wanting to get involved with the police or courts; fear of partner, reprisals and threats; not wanting the perpetrator arrested; fear of losing their child, home, and/or income).[3,5,7]

Table 1: Definition of Charges

Charge	Definition
Assault	A person commits an assault when a) without the consent of another person, he applies force intentionally to that other person, directly or indirectly; b) he attempts or threatens, by an act or a gesture, to apply force to another person, if he has, or causes that other person to believe upon reasonable grounds that he has, present ability to effect his purpose; or c) while openly wearing or carrying a weapon or an imitation thereof, he accosts or impedes another person or begs.
Assault with a weapon or causing bodily harm	Every one who, in committing an assault a) carries, uses or threatens to use a weapon or an imitation thereof, or b) causes bodily harm to the complainant. "Bodily harm" means any hurt or injury to the complainant that interferes with the health or comfort of the complainant and that is more than merely transient or trifling in nature.
Aggravated assault	Every one commits an aggravated assault who wounds, maims, disfigures or endangers the life of the complainant.
Uttering threats	Every one commits an offence who, in any manner, knowingly utters, conveys or causes any person to receive a threat to a) cause death or bodily harm to any person; b) burn, destroy or damage real or personal property; or c) kill, poison or injure an animal or bird that is the property of any person.

Source: Martin's Annual Criminal Code, 1996.[10]

Table 2: Female victims* in Hamilton-Wentworth by most serious crime in each criminal incident (1990-1994)**

Crime	Victims
Murder 1st degree	10
Murder 2nd degree	2
Manslaughter	0
Attempted murder	9
Robbery - firearms	113
Robbery - other weapon	174
Robbery - other	480
Assault level I	9605
Sexual assault aggravated	9
Sexual assault with weapon	103
Sexual assault	1240
Assault weapon level II	1515
Assault aggravated Level III	58
Assault causing bodily harm	7
Discharge firearm with intent	0
Assault other	10
Other sexual offenses	111
Indecent acts	561
Kidnapping	143
Stalking/Harassment	109
Total	14,259 or 2,852 per year

*All female victims were 16 years of age and over. Female victims of unknown age were excluded. Data includes female spousal assault victims. The same victim may have been involved in several incidents over this period of time. According to the 1991 census, the total number of females 16 years of age and over in Hamilton-Wentworth was 185,065.
**A complete definition of each crime can be found in Martin's Criminal Code[10]

Source: Hamilton-Wentworth Regional Police Services, 1995.

What community services are available in Hamilton-Wentworth to female victims of violence?

Women who experience physical, sexual, or psychological violence from partners may leave their home with their children and relocate temporarily to a women's shelter. These facilities provide 24-hour safe shelter plus counseling and referral services for women and their children. Some victims may turn to community support centres. The women's shelters and some community agencies provide a range of services including individual and group crisis counseling; social support groups; 24-hour anonymous crisis/support telephone lines; public education; court and/or police accompaniment; referral to mental health services; addiction programs; legal aid; and medical services.[5,11]

Table 3 lists the 1995 shelters and counseling/support services available to women in Hamilton-Wentworth and the use of these facilities between April 1994 and March 1995. In the Violence Against Women Survey, only 9% of abused women reported using services of a social agency or shelter.[1] The three main reasons given by abused women for not seeking help from a formal agency or shelter were: not wanting or needing help (40%); perceiving the incident as too minor (25%); and being unaware of any services available (16%).[12] All provincially funded shelter and counseling/support programs are under review in 1996.

How does violence against women affect women's health?

Victims of violence may suffer from physical injuries ranging from bruises, cuts and abrasions, to lacerations, fractures, and serious life threatening or fatal internal injuries.[13] Women experience anger, become worried and vigilant about their safety, lose trust and become fearful.[1] Many women suffer feelings of shame and guilt mistakenly believing themselves to be responsible for the violence. These emotional consequences often interfere with their relationships with men.[5] Moreover, many (approximately one in four) turn to alcohol, drugs or medication, or both to help them cope.[5,13,14] Some women eventually develop problems related to this use.[13,14] Approximately one in five sexual assault victims attempt suicide.[13]

Violence has deleterious health effects on the victim, the family (especially the children), the community, and society as a whole. According to the World Health Organization, health is not merely the absence of disease and infirmity but a state of complete physical, mental, spiritual and social well-being.[15] Fundamental conditions and resources for health include peace, shelter, food, income and equity.[15] Living with violence, or in fear of violence, is clearly in opposition to the fundamental conditions and resources for health.[4]

What can prevent violence against women?

Violence against women can be due to the batterer's need or desire for power and control over his/her partner.[7] Alcohol and drug use by men and women,[14] and family history of violence[5,16] are associated with violence against women. At a community level, negative and harmful attitudes are often portrayed in television and other media.[17] Some community actions attempt to change negative attitudes such as victims deserving what they get, and violence being an acceptable method of resolving conflict. The following page documents some recent community actions to prevent and stop violence against women in Hamilton-Wentworth.

Table 3. Use of Shelters and Counseling/Support Services in Hamilton-Wentworth (April 1 1994-March 31 1995)

Women's Shelters	**Total number of residents**
Inasmuch House (529-8149)	412 women; 334 children[1]
Interval House of Hamilton-Wentworth (547-8485)	153 women; 159 children
Martha House (523-8895)	481 women; 335 children
Hamilton-Wentworth Chapter of Native Women (522-1501)	104 women and children
Young Women's Christian Association[2] (522-9922)	567 women
Counseling /Support Services for Women	**Total number receiving counseling/support services**
Inasmuch House (529-8149)	1,109 sessions[3]
Interval House of Hamilton-Wentworth (547-8485)	266 women
Martha House[4] (523-8895)	642 women
Sexual Assault Centre (525-4573)	48 women (group) and 107 women (individual counseling)
St. Matthew's House (523-5546)	159 families[5]
Elizabeth Fry Society (527-3097 Ext.223)	82 women
Family Services of Hamilton-Wentworth Inc.(523-5640)	184 women; 199 children
Martha House/Catholic Family Services Women's Support Group Program (523-8895/527-3823)	934 women
Second Stage Housing Counseling and Housing Support Program (577-1173)	85 women and 157 children
Victim Services of HWRP[6] (546-4904)	Data is not available

1. Figure includes Hamilton and out-of-town residents.
2. Facility charges fee for services.
3. Figure refers to the number of residential counseling sessions provided rather than the number receiving counseling services.
4. This support group is offered in conjunction with Catholic Family Services of Hamilton-Wentworth.
5. Facility offers a community family support program rather than individual counseling/support services.
6. HWRP = Hamilton-Wentworth Regional Police.

Phone numbers provided are business numbers rather than crisis/help line numbers.

According to the 1991 census, the total number of females 16 years of age and over in Hamilton-Wentworth was 185,065.

Source: Each service agency was contacted to obtain the information compiled in Table 3.

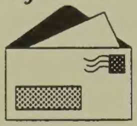
What are recent community actions to stop violence against women in Hamilton-Wentworth?

- Co-ordination of community services and programs through the *Woman Abuse Working Group (WAWG)*
  November wife assault prevention month activities: e.g., "*Take Back the Night*" march for women
  December 6: Canada's national day of remembrance and action on violence against women: *The Montreal Massacre Memorial Event*
- Community information, support and referral services
  e.g., *Sexual Assault Treatment Program (Chedoke-McMaster Hospitals)* (521-2100 ext. 5733 or 3557)
  e.g., Safety First Support Group for children who witness violence (529-8149)
  e.g., Responding to Woman Abuse: Resources in Hamilton-Wentworth booklet (525-9140 ext. 22210)
- Community prevention programs
  e.g., *Response by Schools to Violence Prevention (RSVP)* (523-1020)
- *Police laws and training to assist victims and perpetrators* protocol developed by the Hamilton-Wentworth Regional Police Family Crisis Unit and shelters

Methods. Data on spousal and public violence in Hamilton-Wentworth (Chart 1 and Table 2) were obtained from the Hamilton-Wentworth Regional Police Services. Each service agency was contacted to obtain the information compiled in Table 3. The Violence Against Women survey was conducted on behalf of Health Canada to determine the nature and extent of male violence against women in Canada. A total of 12,300 Canadian women 18 years of age and older from the ten provinces were interviewed about their experiences of physical and sexual violence since the age of 16. Households were randomly selected allowing statistically reliable estimates to be made of the general population.[5]

Now Let's Hear From You

Your comments and suggestions are important to us. Let us know what you think about this issue. The contact person for this ***Infowatch*** is Katy Wong. We can be reached at:



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Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A Service of the Health Priorities Analysis Unit
to inform people about research on health

June 1996
Volume 9, Number 2

Caregiving Trends:
Informal Caregivers to Seniors
in Hamilton-Wentworth

What's this issue about?

Informal caregivers are unpaid providers of care who are usually family or friends.[1,2,3,4] Women are more likely to be caregivers than men.[1,2,3] Our aging population[5] combined with the slow and steady shift to home-based care is placing increasing demands on informal caregivers to seniors.[6] At the same time, demographic and societal changes will continue to affect the availability and ability of informal caregivers, particularly women, to provide support to seniors. This issue of ***Infowatch*** will examine these changes and discuss present and future informal caregiving in Hamilton-Wentworth.

Who's providing care?

Canadian studies have found that family and friends provide at least 80% of caregiving to seniors[1,2,3,4] and three-quarters of these informal caregivers are women.[1,2,3] Caregivers are typically middle-aged and young seniors with one study finding the average age to be 57.[2] In 1991, residents aged 15 and over in Central West Ontario (the regions of Brant, Halton, Haldimand-Norfolk, Hamilton-Wentworth, Niagara, Waterloo and Wellington-Dufferin-Guelph) were asked if within the last 6 months they provided care inside or outside their home for a close friend, relative or family member who needed help because of chronic illness, old age, disability, mental retardation or mental illness.[7] Overall, 8% of residents reported providing care to someone aged 65 or older. Chart 1 shows that 59% of these caregivers to seniors were female and 57% were over the age of 45.[8] Other studies have found that spouses, especially wives, are most likely to be caregivers followed by children, especially daughters.[2,4] Caregivers are more likely than non-caregivers to be older and married or in a common law relationship.[8]

- **Men...husbands and sons**

The number of men giving care, particularly husbands, is increasing. Adult sons also are caring more for aging parents. Men are acquiring new skills through increasing involvement in child care. Early retirement and home-based care may enable more men to care for older family and friends.[1]

How are caregivers changing?

- **Aging Caregivers**

As the population ages and seniors live longer, caregivers themselves are aging.[1] Caregivers are supporting senior relatives and friends for longer periods at a time when their own health and function may be declining. Currently, and in the future, caregivers may be working and supporting combinations of grandchildren, children at home, adult children, aging husbands or wives, elderly parents or grandparents.[2,6]

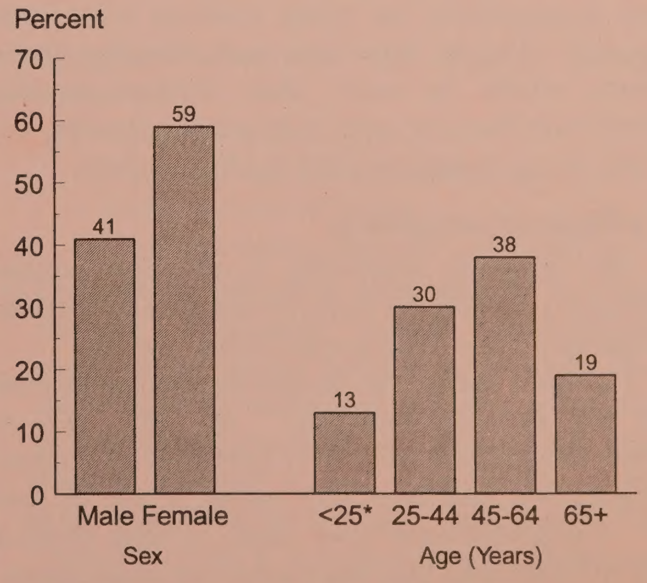


Chart 1: Characteristics of Caregivers to Seniors Aged 65 and over in Central West Ontario, 1991

*Based on small numbers so interpret with caution.
Source: Ontario Ministry of Health. Mental Health Supplement to the 1990 Ontario Health Survey: Data Diskettes. 1995.

- **Marriage and Children**

The increasing proportion of women in the labour force and changing family structures have resulted in a recent trend for women to marry later, have children later and have fewer children.[1,5] A recent short-term increase in Hamilton-Wentworth and Ontario fertility rates is explained by many women in the baby boom generation postponing childbirth into their 30's. The fertility rate is expected to decline from the recent level of 1.76 to 1.68 children per woman by the year 2001.[5] Marrying and having children later in life means more women may be caring for children (although fewer children than in the past) and aging parents simultaneously.[1] In the future, more children from single child families will have to assume sole responsibility for aging parents.[1]

- **Women returning to the labour force**

As the population ages, so too will the labour force. Chart 2 shows the past and projected labour force participation rates for women aged 45 to 64. The increasing labour participation by these women is expected to level off after 2001.[5] These changes have implications for the future since these women are our future "pool" of informal caregivers. There may be fewer volunteers and less time to assist older family members. Child care will remain an issue for working women with many seeking support from aging parents.[1]

- **Changing family structure**

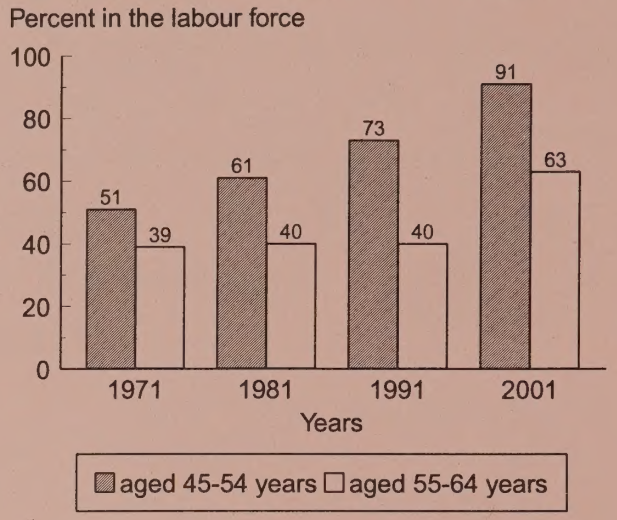
The family structure is changing due to declining marriage rates, increasing divorce rates, reconstructed families and lone-parent families.[5] It is estimated that one in three marriages in Ontario ends in divorce.[5] Women head 84% of all lone-parent families in Hamilton-Wentworth.[9] The increase in the number of middle-aged divorced women is a concern as they assume responsibility for aging relatives with fewer resources.[1] Family break-ups and changing living standards results in more adult children needing emotional and financial support themselves; leaving less time and energy to support older family members.

The effects of caregiving

The caregiving relationship is often very positive and satisfying for both the caregiver and the care receiver, but it can also create stress and difficulties for both.[1]

Caregiver burden can include physical, emotional, social and financial problems.[1,9] In 1991, 38% of informal caregivers to seniors in Central West reported that caregiving interfered with having a life of their own.[8] Caregivers were more likely to have physical health problems than their non-caregiving counterparts.[8] Furthermore, caregivers of seniors with dementia experience increased burden including chronic health problems and depressive symptoms.[10,11] It has been reported that 10% to 20% of employed caregivers leave their jobs to become full-time caregivers.[3] Caregivers offer care while experiencing chronic health problems and burdens of their own.[1,10]

Chart 2: Past and projected participation of females in the labour force by age group in Hamilton-Wentworth, 1971 to 2001



Source: Hamilton-Wentworth Planning and Development Department, 1992.

How are care receivers changing?

- **Aging women outnumber aging men**

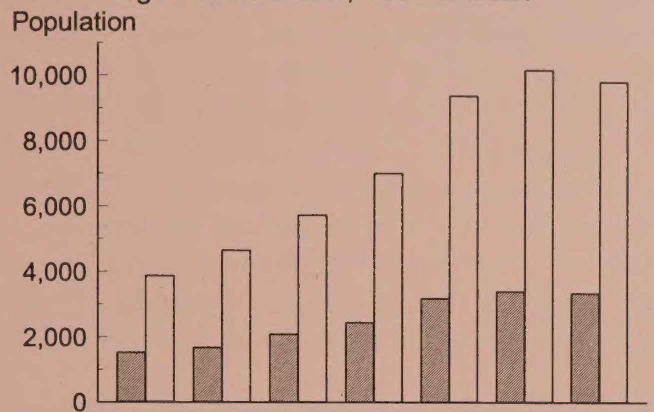
The number of Hamilton-Wentworth seniors 8 years and over will more than double by the year 2011 (Chart 3).[5] Currently at 85 years of age, women outnumber men nearly three to one. This gender imbalance will continue over the next 30 years. Women currently account for 58% of persons aged 65 and over in Hamilton-Wentworth.[9] In 1991, 70% of the seniors receiving care in Central West were female and 44% of the care receivers were parents to the caregivers (Chart 4).[8]

Although life expectancy is increasing, the expectancy of a disability-free life is increasing more slowly.[1,12] In 1990, 31% (18,000) of seniors 65 years and over living at home in Hamilton-Wentworth reported one or more physical limitations.[13,14] The likelihood of suffering from chronic conditions and physical limitations increases with increasing age, so older seniors may have more difficulty living independently and often require the greatest amount of support.[2]

- **Women are living alone**

Since older women outnumber older men, they are less likely to remarry, leaving many living alone in later years.[15] If local and national trends remain consistent, by the year 2011 Hamilton-Wentworth could expect 11,00 (42%) women 75 years of age and over to be living alone.[15] Seniors who live alone are more likely to go on to live in a nursing home.[1,2] Women living alone likely will be the largest group relying on informal caregivers.

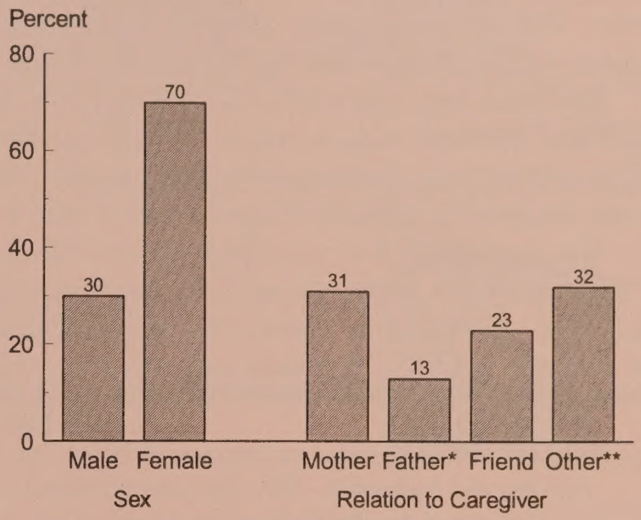
Chart 3: Hamilton-Wentworth Population Projections, Ages 85 and over, 1991 to 2021



Year	1991	1996	2001	2006	2011	2016	2021
Males ▨	1,525	1,675	2,090	2,450	3,185	3,405	3,350
Females ☐	3,875	4,660	5,735	7,015	9,390	10,185	9,840
Total	5,400	6,335	7,825	9,465	12,575	13,590	13,190

Source: Hamilton-Wentworth Planning and Development Department, 1992.

Chart 4: Characteristics of seniors aged 65 and over receiving care in Central West Ontario, 1991



* Based on small numbers so interpret with caution.
**Includes spouse, sibling and other relations.
Source: Ontario Ministry of Health. Mental Health Supplement to the 1990 Ontario Health Survey: Data Diskettes. 1995.

How can we help caregivers?

Older women are caring for the oldest women. Wives and daughters are often reluctant to ask for help because they may perceive caregiving as their duty. Social support can help to relieve caregiver burden.[1,2] Service providers, decision makers and communities need to become aware of and sensitive to the needs of informal caregivers, particularly women.[1] Communities need to develop comprehensive and co-ordinated strategies to ensure programs and services are available to support seniors and their present and future informal caregivers.[1] There should be a variety of options to reflect the differing needs of informal caregivers. Community initiatives should include formal community-based supports (e.g., respite and home support), financial supports (e.g., tax incentives), workplace supports (e.g., flexible hours and on-site information) and informal supports (e.g., mutual aid and advocacy groups).[1]

What is being done in Hamilton-Wentworth?

Some initiatives to help caregivers in Hamilton-Wentworth are listed below. For more information on the services listed refer to the **Resource Guide for Caregivers of Older Adults** available from the Regional Public Health Department (546-3550) or "The Red Book"[16] (528-0104).

✓ **Placement Co-ordination Services** through the Victorian Order of Nurses provide direction and support to caregivers.

✓ **Some Sources for Caregiver Relief** (in home or out of home respite for the caregiver):
- Geriatric Day Hospital, Chedoke McMaster Hospital
- Macassa Lodge Seniors' Day Program
- St. Joseph's Villa, St. Joseph's/Rotary Respite Program
- St. Joseph's Villa, Senior's Day Program
- St. Peter's Hospital
- Seniors Activation Maintenance Program
- Victorian Order of Nurses, Adult Day Centre and Caregiver Support Program
- Visiting Homemaker Association of Hamilton-Wentworth Incorporated

✓ **Caregiver Information and Support Groups** are offered by:
- Alzheimer Society
- Regional Public Health Department
- Victorian Order of Nurses
- Local churches or community organizations

✓ **Community Initiatives** undertaken by the Caregiver Advisory Committee include: presentations on caregiving and seniors' issues to service clubs, churches, senior's centres, workplaces, and other community and professional organizations; and working with groups to develop programs in their communities to increase awareness of caregiving issues. The Caregiver Planning Committee plans to develop a local caregiving network and to support a study of informal caregiving in Hamilton-Wentworth.

Methods

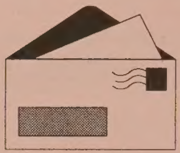
Data on caregivers and care receivers was obtained from the Mental Health Supplement to the Ontario Health Survey. This household survey sampled Ontario residents aged 15 and over living in private dwellings. The overall response rate for Ontario was 76.5%. In Central West Ontario the sample size was 1,813 residents.

The Hamilton-Wentworth Planning and Development Department's Population, Household and Labour Force Projections[5] provided data to predict the implications of social trends specific to Hamilton-Wentworth. The cohort survival method was used to project future population growth. Labour force participation was estimated by applying age and sex specific labour force participation rates to the age and sex breakdown for the forecast population.

The present and future caregiving issues were obtained through consultations with Public Health Nurses with the Regional Public Health Department, the Caregiver Planning Committee and the Caregiver Advisory Committee which were established to address the issues of informal caregivers of seniors in Hamilton-Wentworth with input from community service providers and caregivers, respectively.

Now Let's Hear From You

Your comments and suggestions are important to us and are being incorporated into publications from the Health Priorities Analysis Unit like this ***Infowatch***. This issue was developed by Elizabeth Conti of the Regional Public Health Department and Vicki Torrance of the Health Priorities Analysis Unit. Let us know what you think about this issue. We can be reached at:



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Infowatch is a newsletter of the Health Priorities Analysis Unit, and is published when new data are available. Back issues of ***Infowatch*** on a variety of topics can be obtained in the ***"Infobook: The Infowatch Series"*** published by the Health Priorities Analysis Unit. ***Infowatch*** describes health and social data similar to that found in the **Fact Book on Health in Hamilton-Wentworth (1995)** also available from the Health Priorities Analysis Unit.

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Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A Service of the Health Priorities Analysis Unit
to inform people about research on health

October 1996
Volume 9, Number 3

Cancer Trends
in Hamilton-Wentworth

What's this issue about?

As in the rest of Canada, cancer is the leading cause of premature mortality in Hamilton-Wentworth. In addition, it ranks second, behind only cardiovascular disease, for absolute number of deaths. In 1993, cancer was responsible for 1,028 deaths, 28% of all deaths, among Hamilton-Wentworth residents.[1] Cancer represents a group of diseases caused by unregulated growth of abnormal cells in various sites of the body.[2] In order to promote a better understanding of the impact of these diseases on the community, this ***Infowatch*** summarizes recent trends in cancer mortality and incidence among Hamilton-Wentworth residents.

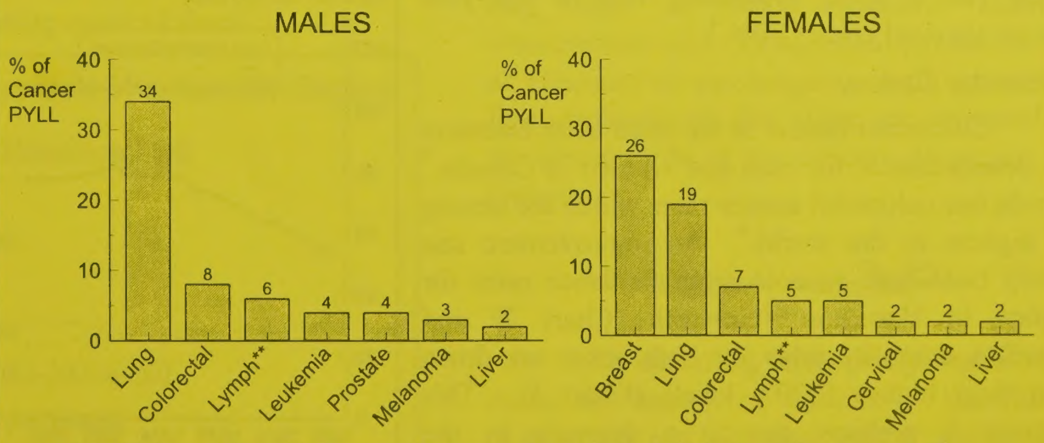
The leading cause of premature mortality

Cancer was responsible for 29% of all potential years of life lost (PYLL) from 1986 to 1993 and, as such, cancer is the leading cause of premature mortality in Hamilton-Wentworth, ahead of both cardiovascular disease (22%) and injuries (17%).[1] PYLL measures premature mortality by summing the years of life lost between the ages of 1 and 75 years, arbitrarily defining premature mortality as death prior to age 75.

Between 1986 and 1993, men in Hamilton-Wentworth lost a yearly average of 4,103 potential years of life to cancer while women averaged 3,732 PYLL.[1] Although more men die from cancer every year, female specific cancers occur earlier in life contributing more to female PYLL.

Together, lung, colorectal, breast and prostate cancer accounted for 48% of all cancer PYLL and 50% of all cancer deaths from 1986 to 1993.[1] Chart 1 displays the distribution of PYLL by common cancer type. Lung cancer was by far the greatest contributor to male PYLL at 34%, and was second, for females, at 19%, after breast cancer (26%). Colorectal cancer, a prominent cancer in both men and women, was responsible for 8% of the total cancer PYLL in Hamilton-Wentworth between 1986 and 1993.[1]

Chart 1: Percentage of Potential Years of Life Lost* (PYLL) Due to Cancer by Selected Cancer Site, in Hamilton-Wentworth, 1986 to 1993



* Potential Years of Life Lost is the sum of the number of years that individuals did not live prior to age 75.
** Lymphatic and Hematopoietic Tissue excluding Leukemia
Source: Ontario Ministry of Health. Mortality Database, 1996

Trends in mortality and incidence

Lung and Breast Cancer

The most startling observation over recent years is the sharp increase in female deaths due to lung cancer. In fact, while breast cancer remains the most commonly diagnosed cancer in women (Chart 2), lung cancer has exceeded breast cancer as the leading cause of cancer death in women because of its higher rate of lethality (Chart 3).[3] In Ontario, those with breast cancer have a good prognosis with a 74% five-year relative survival rate, while those with lung cancer have only a 16% five-year relative survival rate.[4] A relative cancer survival rate refers to the number of five-year survivors as a percentage of those diagnosed, after adjusting for causes of death other than cancer.[4] The increase in lung cancer incidence and mortality in women corresponds to an increase in female tobacco consumption which began after World War II and continued in the 1970's.[5] The incidence and mortality of lung cancer in males has begun to slightly decline (Chart 2 and Chart 3). This trend is likely a result of the decrease in tobacco consumption among men which began in the mid-1960's.[3]

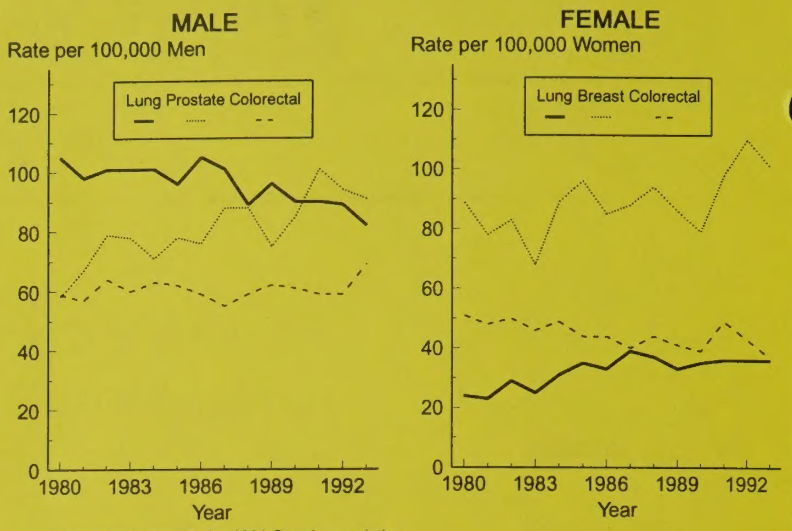
Prostate Cancer

As in the rest of Canada, Hamilton-Wentworth has experienced a marked increase in prostate cancer incidence. In 1991, prostate cancer replaced lung cancer as the most frequently diagnosed cancer in Hamilton-Wentworth men (Chart 2).[6] Prostate cancer mortality has remained relatively stable and is considerably lower than lung cancer (Chart 3). The increasing gap between incidence and mortality rates for prostate cancer suggests earlier detection and more effective treatment.[3] In Ontario, prostate cancer has a good prognosis, with a five-year relative survival rate of 70%.[4]

Colorectal Cancer

Colorectal cancer is the third most common and deadly cancer for men and women in Canada.[3] Canada has colorectal cancer rates which are among the highest in the world.[4] An improvement can readily been seen in colorectal incidence rates for women in Hamilton-Wentworth (Chart 2) and Canadian mortality rates for both sexes are down from their higher 1970's levels (Chart 3). This progress is perhaps due to a decrease in the consumption of fats and an increase in fibre intake by Canadians.[7] The five-year relative survival rate is above 50% for both sexes.[4]

Chart 2: Age-Standardized* Incidence Rates
for Selected Cancer Sites, in Hamilton-Wentworth, 1980-1993



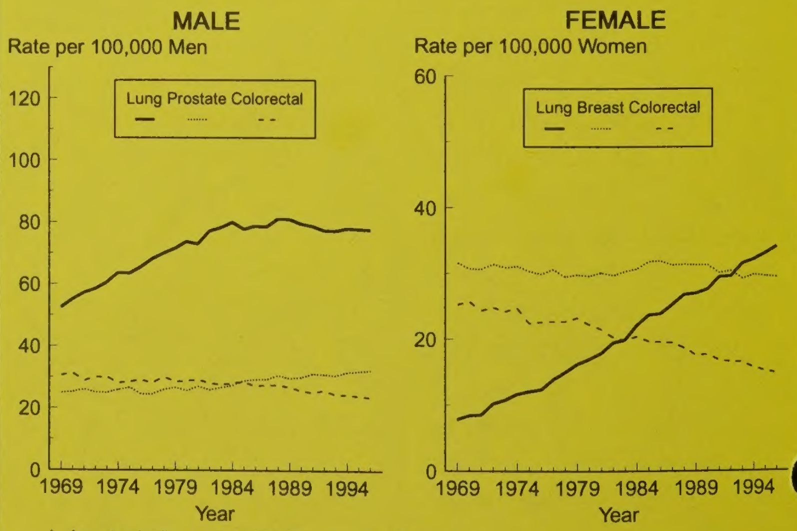
* Age-standardized to the 1991 Ontario population

Source: Ontario Ministry of Health. Cancer Incidence Database, 1996.

Skin Cancer

Skin cancer can refer to both melanoma and non-melanoma skin cancer. Non-melanoma skin cancer is excluded from cancer incidence data because it is most often treated successfully without hospitalization or a pathologic specimen.[3] This affects incidence data considerably because, while rarely fatal, non-melanoma skin cancer is the most common cancer in Canada with an estimated 62,500 diagnosed cases in 1996.[3] Malignant melanoma skin cancer, the more serious form of skin cancer, contributes almost 50 cases every year in Hamilton-Wentworth.[6] Too few cases occur in Hamilton-Wentworth annually to observe trends over time, however, in Canada there has been a steady increase in melanoma incidence rates over the past 20 years.[3]

Chart 3: Age-Standardized* Mortality Rates
for Selected Cancer Sites, in Canada, 1969-1996**

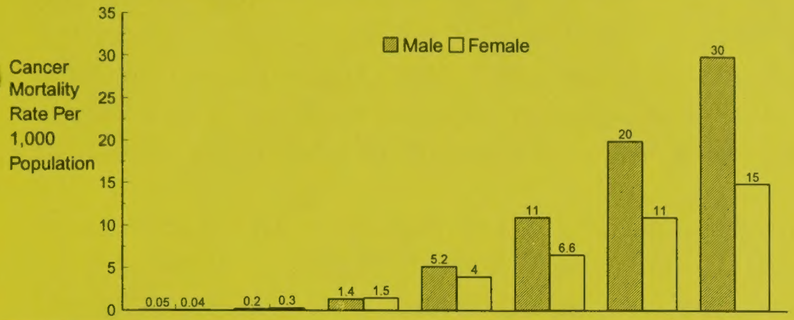


* Age-standardized to the 1991 Canadian population

** 1994-1996 rates are estimated

Source: National Cancer Institute of Canada: Canadian Cancer Statistics, 1996.

Chart 4: Average Yearly Rate of Cancer Mortality per 1,000 Population, by Age and Sex, in Hamilton-Wentworth, 1986-1993



Age Group	<25	25-44	45-54	55-64	65-74	75-84	85+
Average # of Male Deaths Per Year	4.0	16	35	110	179	139	46
Average # of Female Deaths Per Year	2.6	20	36	89	134	119	57

Source: Ontario Ministry of Health. Mortality Database, 1996

An aging population

As Chart 4 illustrates, the cancer mortality rate increases dramatically with age for both sexes. Of all cancer deaths from 1986 to 1993 in Hamilton-Wentworth, 68% occurred among those 65 years of age and over (32% in those 65 to 74 and 36% in those 75 and over).[1] Of all new cases of cancer reported between 1986 and 1993, 60% developed in those aged 65 or over.[6]

The age distribution of cancer deaths forecasts an increased demand for cancer care as the Hamilton-Wentworth population ages. Even assuming steady age-specific incidence rates, the absolute number of cancer cases will increase as the baby boom generation reaches their sixties. In 1980, there were 1,464 new cases of cancer diagnosed in Hamilton-Wentworth residents. By 1993, that number had increased to 1,966, a 34% increase over 13 years.[6]

While age is the number one "risk factor", cancer is a disease which also affects children and younger adults, (as the high PYLL indicates). In Hamilton-Wentworth cancer is the second leading cause of death in children aged 1 to 14, after injuries.[1] For adults under the age of 65, cancer surpasses cardiovascular disease as the leading cause of death.[1]

Some Contacts in the Hamilton-Wentworth Region

- Canadian Cancer Society, Hamilton Unit
  (905) 527-4555
- Cancer Assistance Program
  (905) 383-9797
- Cancer Information Service
  (905) 387-1153 or 1-800-263-6750
- Regional Public Health Department
  (905) 546-3500

How does Hamilton-Wentworth compare to Ontario and Canada?

A monograph from the Ontario Cancer Treatment and Research Foundation reported that the age-standardized overall male cancer incidence rate, from 1980 to 1991, for Hamilton-Wentworth was significantly higher ($p<0.05$) than the average Ontario rate.[8] The female rate for all sites was not significantly different than the Ontario rate,[8] however the Ontario rate for women is higher than in any other region of Canada.[9] Ontario males experience the second highest incidence rate in the country, behind only Quebec.[9]

By specific cancer site, males in the Hamilton-Wentworth region have a statistically significant higher rate of stomach and lung cancer ($p<0.05$) as compared to other Ontario regions.[8] Females in Hamilton-Wentworth do not have cancer incidence rates which differ significantly from the overall Ontario rate, except in the case of breast cancer, where they have a statistically significant ($p<0.05$) lower incidence.[8] Our current limited knowledge of the causes of these cancers hinders explanation of these geographic differences.

Can the risk of cancer be reduced?

Cancer can develop as the result of factors beyond the control of the individual, such as genetic history and age. However, after age, various lifestyle choices are the biggest determinants of cancer risk. The modifiable risk factors include smoking, a diet high in fats, excessive alcohol consumption and occupational/environmental exposure to carcinogens. It is estimated that smoking and diet alone are responsible for almost 50% of the cancers diagnosed in Ontario.[2]

* * *

An upcoming issue of ***Infowatch*** will focus on causes of cancer in Hamilton-Wentworth and potential cancer prevention strategies in more detail.

Methods

Data related to potential years of life lost and mortality were the most recent available from the Mortality Database provided through the Ontario Ministry of Health.[1] The Office of the Registrar General collects, compiles and stores records of deaths while Statistics Canada performs final editing. These data are provided to each of the 42 public health units in Ontario and allow breakdowns of mortality statistics by sex and age groupings. Canadian mortality trends over time were provided instead of Hamilton-Wentworth data to allow for more years and more stable rates.

The Ontario Cancer Incidence Database is provided through the Ontario Ministry of Health and includes the number of new cancer cases diagnosed each year.[6] The Ontario Cancer Registry is responsible for collecting, compiling and storing the cancer incidence records. Incidence rates were calculated and age-standardized to the 1991 Ontario population.

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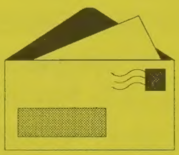

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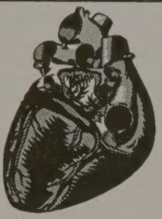
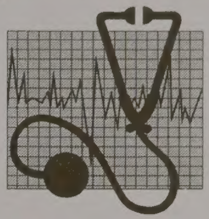


Heart Health: What's the Beat?

Cardiovascular Disease in Hamilton-Wentworth



What's this issue about?

In North America, cardiovascular disease is the number one killer both of men and women.[1] Cardiovascular disease refers to a group of diseases of the circulatory system including ischemic heart disease and stroke, the two largest components of cardiovascular disease.[2] Ischemic heart disease refers to any condition in which the heart muscle is damaged or works inefficiently because of reduced blood supply to the heart muscle due to thickening and hardening of the inner walls of the arteries that supply blood to the heart muscle.[3] Heart attack and chest tightness ("angina") are two main forms of ischemic heart disease. In stroke, an area of the brain is damaged by a sudden decrease in blood supply or by hemorrhage to the brain.[2,4] This ***Infowatch*** outlines patterns of mortality and hospitalization due to cardiovascular disease, in particular ischemic heart disease and stroke, among Hamilton-Wentworth residents.

Cardiovascular disease: the leading cause of death

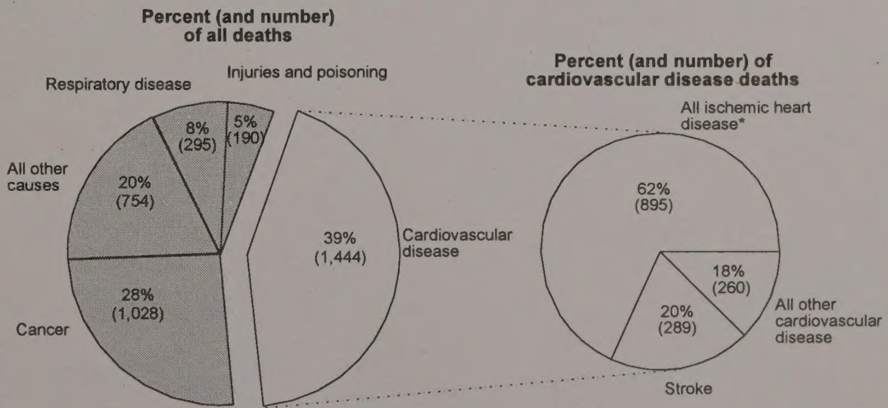
Each year approximately 1,500 Hamilton-Wentworth residents die from cardiovascular disease.[5] In 1993 it was the leading cause of death accounting for 1,444, or 39%, of all deaths in Hamilton-Wentworth (Chart 1). During this year, more people died from cardiovascular disease than any other cause including cancer (1,028 deaths or 28% of all deaths) and all other causes combined (33% of all deaths) (Chart 1).

In 1993, the greatest proportion of cardiovascular disease deaths were due to ischemic heart disease (62% or 896 deaths) and stroke (20% or 282 deaths) (Chart 1). Heart attacks accounted for more than half (54%, 486) of all ischemic deaths and 13% of all deaths in Hamilton-Wentworth in 1993. On average between 1986 and 1993 heart attacks and strokes claimed 427 and 271 lives a year, respectively, in Hamilton- Wentworth.

Age and gender differences

For men and women both, cardiovascular disease mortality increases dramatically with age (Chart 2). In Hamilton-Wentworth, males experienced two to three times the average death rate of females in all age categories except 85 years and over, for which the male and female death rates were similar. The mortality rates

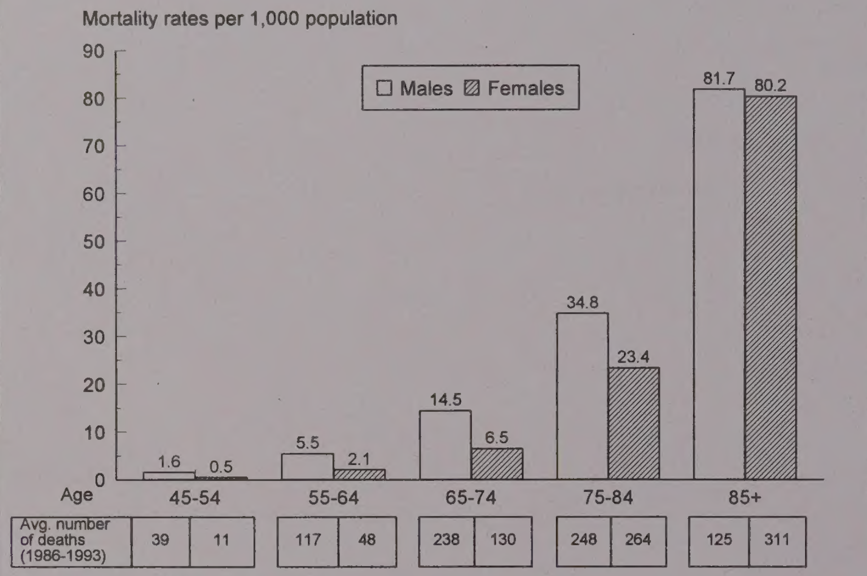
Chart 1: Causes of MortalityAmong Hamilton-Wentworth Residents, 1993



*All ischemic heart disease includes heart attacks.
In 1993, there were a total of 3,711 deaths from all causes in Hamilton-Wentworth.

Source: Ontario Ministry of Health, Mortality Database, 1996.

Chart 2: Average Age-Specific Cardiovascular Disease Mortality Rates (1986-1993) Per 1,000 Population by Gender, Hamilton-Wentworth



Source: Ontario Ministry of Health, Mortality Database, 1996.

confirm that in younger ages, cardiovascular disease kills more men than women.

Although younger men have higher average yearly mortality rates, almost as many women die from cardiovascular disease as men. In 1993, for example, 734 men (37% of all male deaths) and 710 women (40% of all female deaths) died from cardiovascular disease in Hamilton-Wentworth.[5] This is due to the fact that there are more women in the older age groups.

Each year, however, more women than men die from stroke and more men than women die from heart attacks. On average between the years 1986 and 1993, 110 men died from stroke, each year, compared to 161 women. During the same time period, 249 men died from heart attacks compared to 178 women.

Mortality trends over time

Chart 3 shows the decline in deaths due to ischemic heart disease and stroke over the past 13 years in Hamilton-Wentworth. Similar declining trends observed over the past forty years in Canada can be attributed, in part, to population changes in behavioural (e.g., smoking) and biomedical (e.g., high blood pressure) risk factors, and physical (e.g., environmental tobacco smoke) and social environmental risk conditions (e.g., poverty).[6]

◆

Potential years of life lost

Potential years of life lost is a measure of premature mortality and is calculated by summing "the number of years of life *'lost'*, that is, not lived, due to premature death." [2] In this instance, premature death was considered arbitrarily as death occurring prior to age 75.[2]

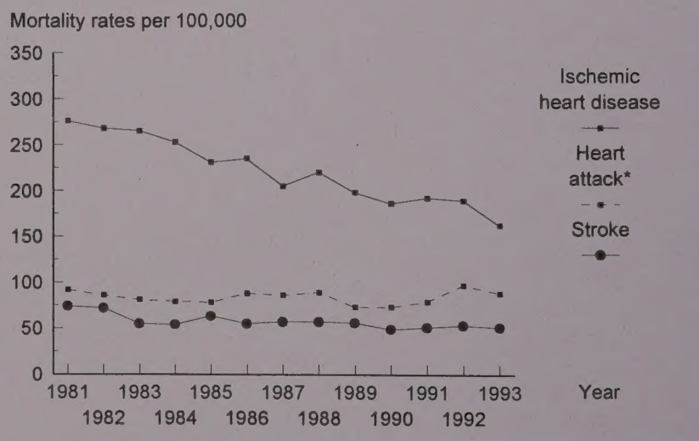
In Hamilton-Wentworth in 1993, cardiovascular disease was the second leading cause of potential years of life lost (5,291 years or 21% of total potential years of life lost) after cancer but ahead of injuries/poisonings. Thus, cardiovascular disease kills more people than cancer but is fatal later in life.

Ischemic heart disease was responsible for 67% (or 3,567 years) of all potential years of life lost from cardiovascular disease (heart attacks comprised 68% or 2,432 of these years). Strokes contributed to 756 potential years of life lost or 14% of all years lost from cardiovascular disease. In 1993, potential years of life lost from cardiovascular disease was much greater for males (3,719 years) than females (1,572 years) indicating again, that cardiovascular disease kills more younger-aged men and more older aged women.

Hospitalization from cardiovascular disease

A hospital separation is defined as either discharge from hospital due to death, return to home, transfer to another facility or patients signing themselves out.[7] Hospital separation statistics are based on occurrences (that is, utilization) and not individuals. In 1992

Chart 3: Age-Standardized Mortality Rates for Ischemic Heart Disease and Stroke in Hamilton-Wentworth, 1981-1993



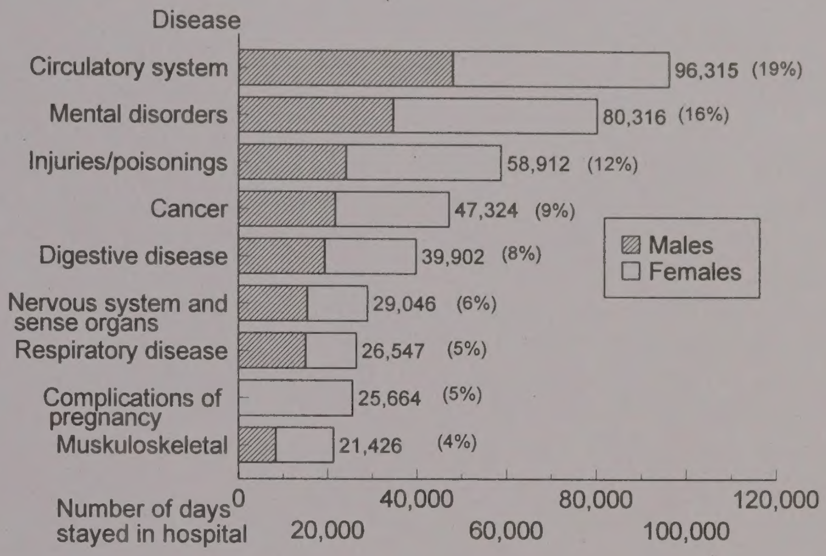
*Heart attack is a subcategory of ischemic heart disease.
Mortality rates were age-standardized to the 1991 Ontario population.

Source: Ontario Ministry of Health, Mortality Database, 1996.

cardiovascular disease comprised the greatest proportion of all hospital separations (15% or 7,433), unchanged from that in 1991 (7,470 or 15% of all separations).[8] Of the 7,433 hospital separations due to cardiovascular disease in Hamilton-Wentworth in 1992, 44% were for ischemic heart disease (35% of these were heart attacks), and 12% were for stroke.

In 1992, 96,315 or 19% of all hospital days stayed were for the treatment of cardiovascular disease (Chart 4). This was more than any other condition including mental disorders, injuries/poisonings, and cancer. Over one-third (37%) of all cardiovascular disease hospital days stayed were a result of stroke, 27% were due to ischemic heart disease, and 13% were due to heart attacks. Thus, although stroke was responsible for 18% of all cardiovascular disease mortality and 12% of all hospital separations, it accounted for a greater proportion (37%) of cardiovascular disease patient days in hospital. In 1992, stroke ranked second, after psychoses, for the greatest number of hospital days stayed.[8]

Chart 4: Number of Hospital Days Stay (and Percent of Total) by Gender and Disease Category, Hamilton-Wentworth Residents, 1992



In 1992, there were a total of 507,203 days stayed in hospital from all causes.

Source: Ontario Ministry of Health, Morbidity Reports, 1995.

How does Hamilton-Wentworth compare?

In 1992, the age-standardized cardiovascular disease mortality rate for Hamilton-Wentworth residents was higher than the Ontario rate (Table 1). To permit comparisons between populations the rates were age-standardized to compensate for differences in the age distribution of the two populations. Compared to other neighbouring regions in Central West, Hamilton-Wentworth ranked fourth after Haldimand Norfolk, Brant, and Wellington-Dufferin which had the highest cardiovascular disease mortality rates.

Table 1. Age Standardized* Cardiovascular Disease Mortality (1992) and Hospital Separation Rates (1994) per 1,000 Population, Hamilton-Wentworth, Ontario and Other Neighbouring Regions

Region	Mortality Rate per 1,000	Rank	Hospital Separation Rate per 1,000	Rank
Haldimand Norfolk	3.15	1	20.97	1
Brant	3.13	2	16.45	2
Wellington-Dufferin	3.11	3	14.56	4
Hamilton-Wentworth	**2.95**	**4**	**13.95**	**6**
Niagara Region	2.93	5	16.23	3
Waterloo Region	2.67	6	13.18	7
Halton Region	2.17	7	14.22	5
Ontario	**2.67**		**14.33**	

*Rates were age-standardized to the 1991 Ontario Census population.

Source: Canadian Institute for Health Information (CIHI), 1996.

The 1994 hospital separation rate for Hamilton-Wentworth residents was lower than Ontario and ranked second lowest of all Central West Regions. For each year since 1986, the Hamilton-Wentworth cardiovascular mortality rate has been higher than Ontario while the hospital separation rate has been consistently lower than Ontario.

What is being done?

Due to the growing number of people living into advanced ages, cardiovascular disease will continue to be an important health problem. To coordinate the fight against cardiovascular disease, the Hamilton-Wentworth Regional Public Health Department and the Hamilton Civic Hospitals have initiated a *Comprehensive, Integrated Community and Hospital Cardiovascular Disease Prevention Program*. The overall goal of this cardiovascular prevention initiative is to improve the health of the residents of the Region of Hamilton-Wentworth through the development, implementation and evaluation of a comprehensive program of heart health promotion and cardiovascular disease prevention.

Stay tuned for an upcoming ***Infowatch*** on cardiovascular disease prevention.

Some community heart-health contacts in the Hamilton-Wentworth Region

- *Heart and Stroke Foundation of Ontario*, 19 Albert Street, 545-2400
  Heart & Stroke Healthline, 1-800-360-1557
- *Regional Public Health Department*, 25 Main Street West, 4th Floor, 546-3500
- *Hamilton-Wentworth Heart Health Network*, 237 Barton Street East, 3rd Floor
  c/o Cardiac Care Clinic, Hamilton General Hospital, 577-8033
- *Lung Association - Hamilton-Wentworth*, 502 Concession Street, 383-1616
- *Canadian Diabetes Association*, 501 Concession Street, 385-3538

Methods

Cardiovascular disease refers to all diseases of the circulatory system classified according to the *International Classification of Diseases, ninth revision* (ICD-9) 390-459. ICD-9 390-459 includes: acute rheumatic fever (390-392); chronic rheumatic heart disease (393-398); hypertensive disease (401-405); ischemic heart disease (410-414); diseases of pulmonary circulation (415-417); other forms of heart disease (420-429); cerebrovascular disease (430-438); diseases of arteries, arterioles and capillaries (440-448); diseases of veins and lymphatics, and other diseases of the circulatory system (451-459). Ischemic heart disease (410-414) includes acute myocardial infarction (410) and other ischemic diseases (411-414) such as angina pectoris, chronic ischemic heart disease, and sudden death. Injuries and poisonings includes ICD-9 800-999; respiratory disease includes ICD-9 460-519; and cancer includes ICD-9 140-239. Data on cardiovascular mortality and potential years of life lost were obtained from the Ontario Ministry of Health Mortality Database. Hospital separations and hospital days stay data were obtained from the Ontario Ministry of Health Morbidity Reports. When comparisons were made between Hamilton-Wentworth, Ontario and other neighbouring regions, age-standardized rates were used to compensate for differences in the age distribution of the populations.

Now Let's Hear From You

Your comments and suggestions are important to us. Let us know what you think about this issue. The contact person for this ***Infowatch*** is Katy Wong. We can be reached at:

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Infowatch, a newsletter of the Health Priorities Analysis Unit, is published three to four times a year. Back issues of ***Infowatch*** may be obtained in ***"Infobook: The Infowatch Series." Infowatch*** presents health and social data similar to that found in the ***"Fact Book on Health in Hamilton-Wentworth (1995)"*** also available from the Health Priorities Analysis Unit.

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the Hamilton-Wentworth District Health Council.

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Infowatch

Health Priorities Analysis Unit
Faculty of Health Sciences
McMaster University

A Service of the Health Priorities Analysis Unit
to inform people about research on health

February 1997
Volume 10, Number 1

Healthy Hearts:

Preventing Heart Disease and Stroke in Hamilton-Wentworth

What's this issue about?

Cardiovascular disease is the leading cause of death in Hamilton-Wentworth, accounting for 1,516 or 38% of all deaths in 1994.[1] Ischemic heart disease and stroke, the two major forms of cardiovascular disease[2] are caused by a build-up of fatty deposits or "plaque" in the arteries that supply blood to the heart and brain.[3] Although the development of cardiovascular disease is a complex biological process, certain factors are known to be important (Chart 1).[4] This ***Infowatch*** focuses on the percent of people in Hamilton-Wentworth who have modifiable factors for ischemic heart disease and stroke, and identifies some community-based heart health initiatives.

Behavioural factors

Smoking

Smoking is a major preventable cause of cardiovascular morbidity and mortality.[5] Smoking damages the inner surfaces of the blood vessels, makes blood cells stickier and more likely to clot, causes arteries to narrow, and blood pressure to rise.[4]

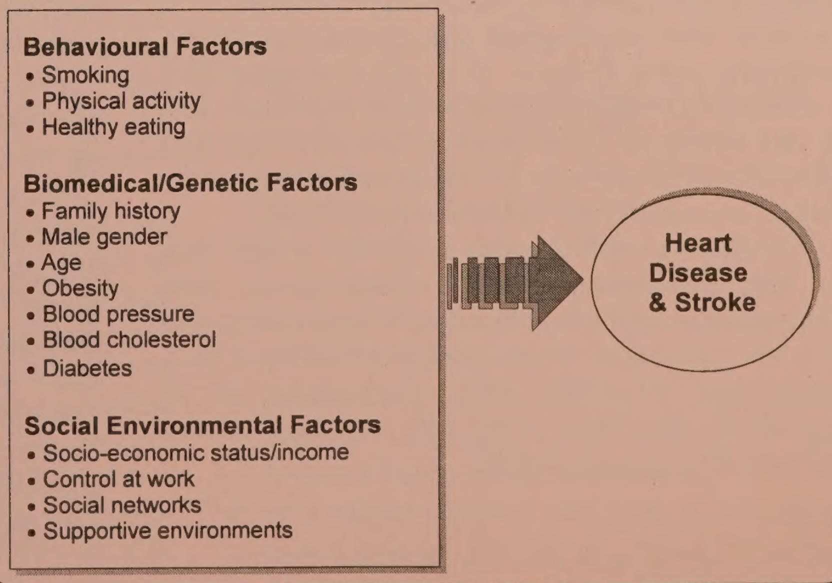
In Hamilton-Wentworth, approximately 21% of respondents from the *1995 Hamilton-Wentworth Health Survey* reported being a "daily" cigarette smoker, while an additional 6% reported being an "occasional" cigarette smoker.[6] Twenty-four percent of 18-24 year olds were daily cigarette smokers compared to 14% of adults aged 65 years and older (See Chart 2). Of the daily cigarette smokers, 50% were males and 50% were females.

Physical Activity

Participation in regular, physical activity reduces cardiovascular disease risk.[7] Physical activity improves the overall function of the heart muscle, improves blood cholesterol levels, blood pressure, and body weight.[4] The US National Institutes of Health recommends *"at least 30 minutes or more of moderate intensity physical activity on most, or preferably all, days of the week."*[8] Moderate intensity activities can be performed while carrying a conversation and include activities such as brisk walking, bicycling, swimming and low-impact aerobics.

Only 45% of respondents (47% of males, 43% of females) from the *1995 Hamilton-Wentworth Health Survey* reported participating in leisure time physical activity at various intensities, five times a week for at least 30 minutes, in the three months preceding the survey (Chart 2).[6] Approximately 41% of males in the 65 years and older age group were physically active compared to only 30% of females in that same age group.

Chart 1: Factors Related to Heart Disease and Stroke



Behavioural Factors
- Smoking
- Physical activity
- Healthy eating

Biomedical/Genetic Factors
- Family history
- Male gender
- Age
- Obesity
- Blood pressure
- Blood cholesterol
- Diabetes

Social Environmental Factors
- Socio-economic status/income
- Control at work
- Social networks
- Supportive environments

Of all respondents from the *1995 Hamilton-Wentworth Health Survey*, walking for exercise (73%), gardening/yard work (53%), home exercises (48%), popular/social dance (40%), and bicycling (26%), were the five most frequently reported leisure time activities.[6] Other activities commonly reported included swimming (22%), weight training (22%), jogging/running (22%), bowling (17%), and exercise/aerobics class (15%).

Healthy Eating

Healthy eating influences blood cholesterol levels, blood pressure and body weight.[5] To reduce the risk of heart disease, the Nutrition Recommendations for Canadians set a population goal of no more than 30% of energy as fat.[9] In Hamilton-Wentworth, data from the *1990 Ontario Health Survey* indicated that the reported average percent of energy from fat was 38% (men's average fat intake as a percent of energy was 39% and women's was 37%).[11] The fat in the diet came primarily from meat and alternatives (30%), added fats such as butter, margarine and salad dressings (19%), and milk products (17%).[11]

Biomedical factors

Obesity

Obesity, especially in the abdominal area is associated with other cardiovascular disease risk factors such as high blood pressure, physical inactivity and diabetes.[7,10] Obesity refers to the presence of excess body fat. The Body Mass Index (BMI) is one way to estimate healthy weights among adults aged 20 to 64 years.[11]

A BMI from 20-25 is associated with low rates of morbidity and mortality and represents a healthy weight for most people.[11] A BMI greater than 27 is associated with an increased risk of health problems, particularly, heart disease.[11] It is best to examine BMI in combination with activity level since individuals who are very physically active are likely to have a high BMI due to excess muscle mass.[12] Those who are physically inactive and have a high BMI are at greatest risk.[12]

Based on self-reported height and weight from the *1995 Hamilton-Wentworth Health Survey*, 30% (37% of males and 24% of females) of respondents aged 20 to 64 in Hamilton-Wentworth had a BMI equal to or greater than 27 (Chart 2).[6] Furthermore, of all respondents aged 20-64 years, 17% were both inactive and had a BMI greater than 27.

Blood Pressure

High blood pressure damages blood vessels, which in turn, may lead to a greater build up of fatty deposits in those vessels.[7] Since most people with high blood pressure have no specific warning signs or symptoms, it is important to have blood pressure checked regularly.[4] The Canadian Task Force on the Periodic Health Examination recommends *"blood pressure measurement be a part of every periodic health examination and of every examination of adults 25 years and older."*[13]

Based on the *1990 Ontario Health Survey*, 9% or 37,300 individuals aged 18 years and older in Hamilton-Wentworth reported having high blood pressure.[11] High blood pressure was more frequent among Hamilton-Wentworth women (10% or 21,700) than men (7% or 15,600).[11] Approximately 68% (58% of males, 76% of females) of respondents from the *1995 Hamilton-Wentworth Health Survey* reported having had their blood pressure checked sometime in the twelve months before the survey.[6] Blood pressure was checked most frequently by individuals in the oldest (65+ years) age group (86%) and least frequently in the youngest (18-24 years) age group (57%) (Chart 2).

Blood Cholesterol

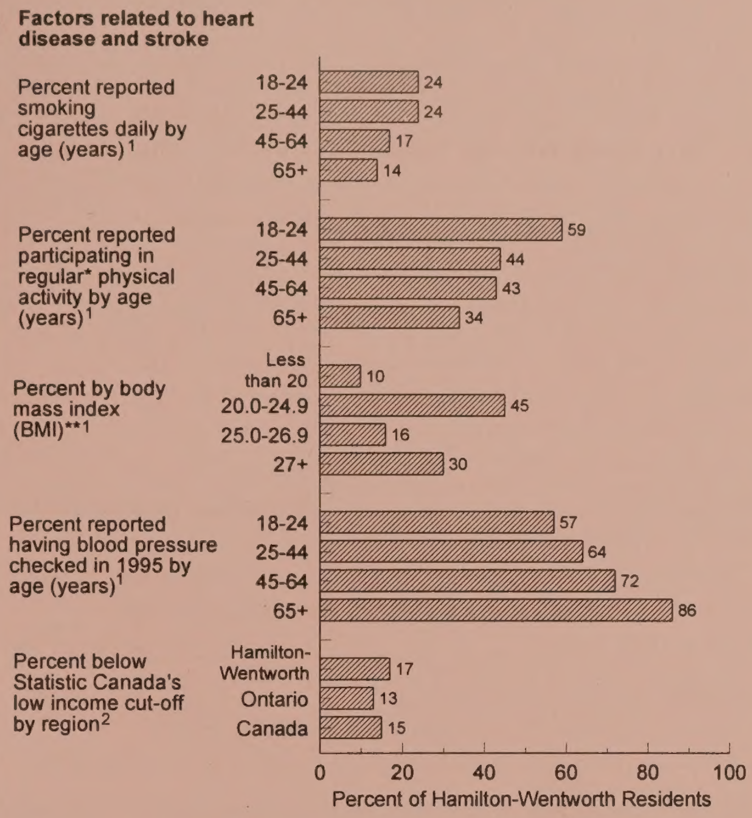
Although cholesterol is essential for all body tissues to function properly, it is also a key component of the fatty deposits and plaque that build up in the coronary arteries.[4,7] Total blood cholesterol levels greater than or equal to 5.2 mmol/L are considered a risk factor for cardiovascular disease.[3]

Based on the *1992 Ontario Heart Health Survey*, 40% of Ontarians aged 18-74 had a total plasma cholesterol level above the desired level.[14] There are no data for Hamilton-Wentworth on the percent who have had their cholesterol levels checked, or the percent with high blood cholesterol.

Diabetes

Insulin resistance, from both type I (insulin-dependent) and type 2 (non-insulin dependent) diabetes mellitus is associated with heart disease.[15] Based on the *1992 Ontario Heart Health Survey*, 4% of Ontarians reported having diabetes although this is thought to be an underestimate since many who have type 2 diabetes are not aware of their condition.[14] There are currently no data for Hamilton-Wentworth on the percent who have diabetes. Diabetes is known to be more frequent in the older age groups with no difference by gender.[14]

Chart 2: Percent of Residents with Factors Related to Heart Disease and Stroke, Hamilton-Wentworth



*Regular physical activity refers to a minimum of five times a week for at least thirty minutes.
**Body mass index = weight (kg)/height (m)^2
In 1995, the population of Hamilton-Wentworth residents,18 years and over, was estimated to be 366,950.

Source: [1] 1995 Hamilton-Wentworth Health Survey.
[2] Statistics Canada, 1991 Census Data.

Social environmental factors

Income

Research shows that even after accounting for other risk factors associated with cardiovascular disease, persons with low income are at increased risk for cardiovascular disease morbidity and mortality[16] In 1991, 17% (or 77,165) of all persons living in private households in Hamilton-Wentworth reported incomes below Statistics Canada's low income cut-off (Chart 2).[17]

Using the 1991 Census data, we examined the distribution of percent low income in each neighbourhood in Hamilton-Wentworth and classified each neighbourhood into five income groups (from low to high income). Age-adjusted mortality rates due to cardiovascular disease were lowest (120 per 1,000 population) in the neighbourhoods with the highest income. In neighbourhoods where percent low income increased, cardiovascular disease mortality rates also increased (129 per 1,000, 136 per 1,000 and 140 per 1,000). The rates were highest (154 per 1,000 population) in neighbourhoods where income was lowest.

Control at Work and Social Networks

Studies indicate that persons working in jobs with high demands and low control over how those demands are met, and persons with few social networks are at increased cardiovascular risk.[7] Occupational status, is one indicator of an individual's level of control at work.[18] In Hamilton-Wentworth, 9% or 21,580 of residents who worked in the last 12 months before the *1990 Ontario Health Survey* were either self-employed, employed professionals or high level managers.[11] Moreover, when asked about social networks, 3% or 10,150 individuals 16 years of age and older indicated they did not have friends or family who could help them in a time of need.[11]

Supportive Environments

Heart-healthy choices are difficult to make if the social environments in which we live either do not provide or support those choices.[19] Smoke-free public places, low fat food alternatives in cafeterias, and walk and bike paths in the community are some examples of environmental supports which facilitate heart-healthy practices. Supportive environments can be achieved through healthy public policies and legislation.[19] In Hamilton-Wentworth, 71% of respondents from the *1995 Hamilton-Wentworth Health Survey* supported regulations to make all enclosed public places smoke-free.[6]

Community-based heart-health initiatives

Based on a comprehensive systematic review of community-based heart health projects, effective interventions had multiple strategies including mass media, health classes, health campaigns and screening clinics.[20] The following are some heart-healthy initiatives in Hamilton-Wentworth:

- ♥ ***Model Tobacco Control Bylaw, 546-3574,*** a model bylaw currently being developed to support smoke-free public places in the Hamilton-Wentworth community
- ♥ ***The Hamilton-Wentworth Bike Line, 546-BIKE,*** a program which promotes bicycling in Hamilton-Wentworth and offers trail maps and biking newsletters
- ♥ ***Supermarket Safari, 546-3630,*** supermarket nutrition education tours offered by the Regional Public Health Department
- ♥ ***Your Heart Matters!, 546-3550,*** an education and support program for people who have had a heart attack

Methods

Cardiovascular disease refers to all diseases of the circulatory system classified by the International Classification of Diseases - 9th Revision (ICD-9) 390-459. Ischemic heart disease (410-414) includes acute myocardial infarction (410) and other ischemic diseases (411-414). Stroke refers to conditions classified under ICD-9: 430-438.

The 1995 Hamilton-Wentworth Health Survey was conducted with a random sample of households across the Hamilton-Wentworth region by telephone in December 1995. Respondents were 18 years of age or older. A 52% response rate was achieved with 1,042 interviews completed. The sample was comparable to the 1991 Census for age, whether born in Canada, and marital status but the sample had more females and a higher socioeconomic status.[21]

The 1990 Ontario Health Survey (OHS) was conducted by the Ontario Ministry of Health to gather information on the determinants of health among residents of Ontario. The OHS surveyed a representative sample of individuals 12 years of age and older. In Hamilton-Wentworth, a 74% response rate was achieved with data collected on 1,340 individuals aged 12 and over.[11]

The Ontario Heart Health Survey was part of ten provincial heart health surveys carried out between 1986 and 1992. The objective of the Surveys was to document the prevalence, distribution and coexistence of the major risk factors for cardiovascular disease. Over 23,000 non-institutionalized adults aged 18 to 74 were selected at random from all 10 provinces. Data were collected via home interviews and clinic visits. Of the subjects invited to participate, 77% were interviewed and 67% attended the clinic.[14]

Percent low income was calculated by dividing the number of persons in low income family units by the total population in private households and multiplying by 100. Low income in a neighbourhood was defined using Statistics Canada's low income cut-offs which are based on size of area of residence and family size.[17] Age-standardized cardiovascular disease mortality rates were calculated by merging 1991 Census data with 1994 Ministry of Health mortality data. The mortality rates were age-standardized to the 1991 Ontario population.

Now Let's Hear From You

Your comments and suggestions are important to us. Let us know what you think about this issue. The contacts for this ***Infowatch*** are Katy Wong of the Health Priorities Analysis Unit and Helen Hale Tomasik of the Regional Public Health Department.

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Infowatch

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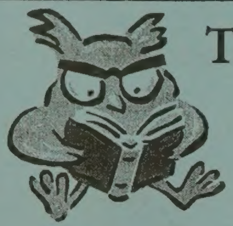


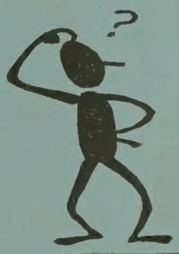
TUBERCULOSIS: A GLOBAL CONCERN

A LOOK AT THE EPIDEMIOLOGY OF TUBERCULOSIS IN HAMILTON-WENTWORTH

What's this issue about?

This issue of ***Infowatch*** is about tuberculosis (TB) disease in Hamilton-Wentworth during 1993 to 1997. This report describes tuberculosis disease, how common it is, how it is spread, the risk factors for TB disease, and treatment issues including drug resistance and adherence to treatment.

What is tuberculosis (TB)?



Tuberculosis is a bacterial infection caused by a bacterium called *Mycobacterium tuberculosis*. After infection this bacterium can become active TB disease or remain inactive in the lung. It can also cause disease in other areas of the body such as larynx, kidneys, bones, abdomen and lymph nodes. This is called *extrapulmonary tuberculosis disease*.

How is TB spread?

TB is spread when someone with active TB in their lungs or throat coughs or sneezes, sending the bacteria into the air. If another person inhales the bacteria into their lungs they may become infected. Not all infections progress to active disease.

TB is not a highly contagious disease. Its spread requires prolonged exposure to someone with active TB.

How common is TB in Hamilton-Wentworth?

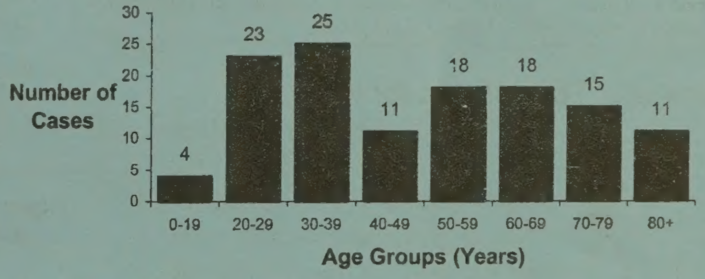
Between 1993 and 1997 there were 125 diagnosed cases of TB in Hamilton-Wentworth. Figure 1 presents the number of TB cases per year. The majority (70% or 88) of TB cases were pulmonary. Of the pulmonary cases, 36% (or 32), were smear positive and therefore more infectious. Despite the present day trend of TB co-infection with HIV few such cases were identified in Hamilton-Wentworth during this time period. Disease caused by the consumption of unpasteurized milk was also seen and cultured as M-bovis.

Age and Gender Differences

Of the 125 TB cases in Hamilton-Wentworth in 1993 to 1997, the greatest number occurred among:

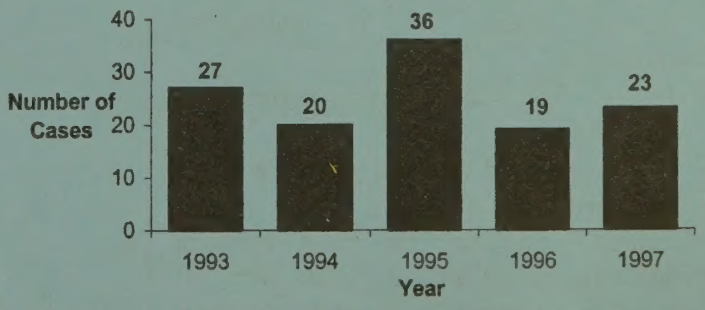
- Males (62% or 77 cases)
- Individuals 20 to 39 years of age (38% or 48 cases) (Figure 2).

Figure 2. Number of Tuberculosis Cases by Age Group, Hamilton-Wentworth, 1993-1997



Source: 1993-1997, RDIS (Reportable Disease Information System), City of Hamilton/Region of Hamilton-Wentworth, Social & Public Health Services Division, Communicable Disease Control Branch, 1998.

Figure1. Number of Tuberculosis Cases, Hamilton-Wentworth, 1993-1997



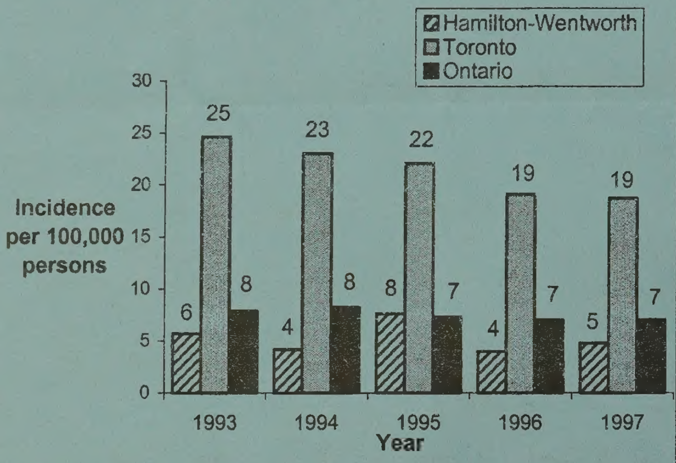
Source: 1993-1997, RDIS (Reportable Disease Information System), City of Hamilton/Region of Hamilton-Wentworth, Social & Public Health Services Division, Communicable Disease Control Branch, 1998.

How does Hamilton-Wentworth compare to Toronto or Ontario?

TB incidence rates vary by geographic location. For example, the TB rates for Hamilton-Wentworth were much lower than the rates for Toronto from 1993 to 1997 (Figure 3).

In 1995, 81% (or 632 out of 776) of the TB cases reported in Ontario were among residents of the Greater Toronto and Ottawa-Carlton areas (1).

Figure 3. Tuberculosis Incidence Rates for Hamiton-Wentworth, Toronto and Ontario, 1993-1997



Source: 1993-1997, RDIS (Reportable Disease Information System), City of Hamilton/Region of Hamilton-Wentworth, Social & Public Health Services Division, Communicable Disease Control Branch and Ontario Ministry of Health, Public Health Branch, 1998.

What are TB risk factors?

A person must be infected with the TB bacteria to be at risk for active TB disease. However, once infected, some people have a higher risk of developing active TB disease.

Risk factors include:

- A weak immune system due to HIV infection, diabetes, renal failure, alcoholism or cancer.
- Living in a country for three or more months where TB is widespread (endemic).
- Living in shelters or correctional institutions.
- Very young and very old persons are also at higher risk of TB.

In Hamilton-Wentworth, the most common identified risk factors among people with TB were travel to or living in TB endemic areas, and a weak immune system due to alcohol abuse, diabetes, and renal disease.

What is the incidence of TB among people who have arrived recently in Canada?

In Canada, TB rates differ according to ethnic origin and immigration status:

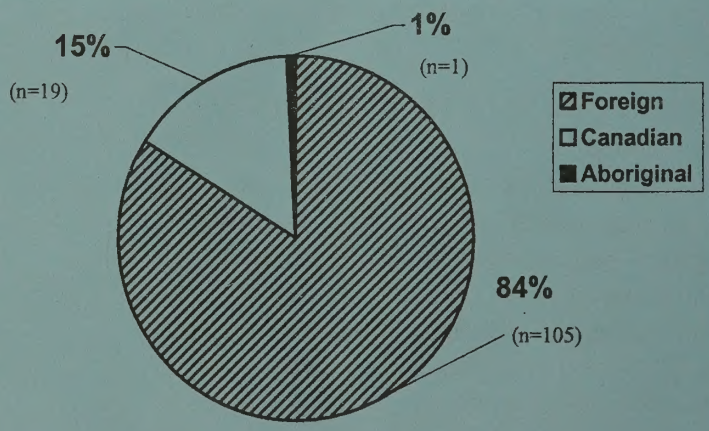
- 60 TB cases per 100,000 persons among aboriginals,
- 50 TB cases per 100,000 persons among Asian immigrants,
- 10 TB cases per 100,000 persons among European immigrants, and
- 3 TB cases per 100,000 persons among non-aboriginal Canadian born persons (1).

The TB incidence rate was on a steady decline in Canada until 1980. Since then, the rate has stabilized at approximately 7 TB cases per 100,000 persons (2).

Prior to the 1980's, the majority of Canadian immigrants were from Western Europe or the United Kingdom. Since the 1980's, immigrants are more likely to be from Asia, Eastern Europe, and Africa – countries endemic to TB.

In 1996, 24% (or 113,965) of Hamilton-Wentworth residents were immigrants and 1% (or 4,825) were aboriginal (3). Figure 4 shows how the 125 TB cases in Hamilton-Wentworth between 1993 to 1997 differed by country of origin and aboriginal status. A majority of foreign-born TB cases came from Asia and Western Pacific (50%) and Eastern Europe (26%) (Table 1).

Figure 4. Number of Tuberculosis Cases by Country of Origin and Aboriginal Status, Hamilton-Wentworth, 1993-1997



Total Number of TB Cases 1993-1997 = 125

Source: 1993-1997, RDIS (Reportable Disease Information System), City of Hamilton/Region of Hamilton-Wentworth, Social & Public Health Services Division, Communicable Disease Control Branch, 1998.

Table 1. Number of Foreign Born Cases of Tuberculosis by Region of Birth, Hamilton-Wentworth, 1993-1997 (N=105)

Region of Birth	Percentage of Cases (%)
Asia & Western Pacific	50
Eastern Europe	26
Western Europe	12
Africa	6
United Kingdom	3
Central/South America	3

Source: 1993-1997, RDIS (Reportable Disease Information System), City of Hamilton/Region of Hamilton-Wentworth, Social & Public Health Services Division, Communicable Disease Control Branch, 1998.

What is TB drug resistance?

The TB mycobacteria can become resistant to anti-tuberculosis drugs. There are two types of resistance, primary and secondary. Primary resistance usually occurs in persons who:

- have not previously received TB treatment, and have been exposed to a person with drug resistant TB, or
- are from a country with a high prevalence of drug resistance, or
- live in a community with greater than 4% primary resistance to the drug isoniazid (4).

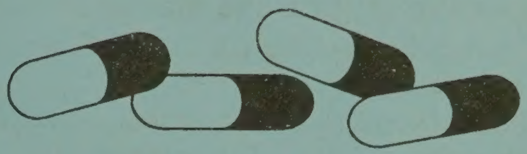
Secondary resistance occurs in persons who have been treated for TB in the past but who received inadequate anti-microbial therapy or unsuccessful repeated drug regimes (4).

Multidrug resistance refers to a strain of TB that is resistant to the drugs isoniazid and rifampin. This type of resistance is a major concern because isoniazid and rifampin are the most common and effective TB treatment drugs available.

Prevention of drug resistance strongly depends on the adequacy of TB treatment programs. Programs that fail to diagnose TB quickly and fail to promote and ensure treatment adherence enable resistant organisms to emerge.

What is the pattern of TB drug resistance in Hamilton-Wentworth?

TB drug resistance can only be detected in cases with bacteriological evidence of TB through culture growth in a laboratory. Positive cultures were found in 66% (or 83) of Hamilton-Wentworth TB cases. Eleven percent (or 9 cases) of these positive cultures showed resistance to one or more anti-tuberculosis drugs. The most common types of resistance were to streptomycin, isoniazid and pyrazinamide. No multidrug resistant cases (resistant to isonized and rifampin) were detected, in Hamilton-Wentworth from 1993 to 1997.



What is Being Done?

According to regulations under the Ontario Health Protection and Promotion Act (HPPA), 1990 (5), all active and reactivated cases of TB are to be reported to the local Public Health Department (Social and Public Health Services Division). Public Health staff obtain clinical and epidemiological information from individuals diagnosed with TB and ensure that appropriate treatment has been received from their physician. Public Health staff also ensure that the patient adheres to a TB treatment regimen and that those in close contact with the patient are tested and referred for further assessment, and treatment if necessary.

How is TB treated?

TB can be treated and cured. Treatment involves the use of three or four anti-tuberculosis antibiotics taken for six, nine or 12 months (6). Monitoring for drug side-effects and compliance is very important. Patient adherence to treatment is an issue because of the long treatment period and the large number of pills (6). Antibiotics for the treatment of TB disease and TB infection can be obtained from the Social and Public Health Division free of charge.

In Hamilton-Wentworth, TB treatment adherence ranged from 78% to 100% during the 1993 to 1997 period. Adherence to treatment is monitored by a Public Health Nurse using telephone or home visits and correspondence with the treating physician.

Nine percent of TB cases died in Hamilton-Wentworth in 1993 to 1997. It is usually difficult to determine whether TB is the direct or secondary cause of death (7). In Canada, of the approximately 2,000 new TB cases reported each year, an estimated 5% (100 cases) result in death with TB as the primary or secondary cause (7). In Ontario, the TB death rate ranged from 7% to 9% during 1993 to 1997 (7).

Control of TB is a community effort involving family physicians, respirologists, radiologists, microbiology laboratories and the public health staff working together to promote TB prevention, early detection and treatment.

Implications for Case Management:

- TB incidence rates are at a plateau. However complacency on the part of TB programs could contribute to increased incidence in future.
- Risk factors such as diabetes and alcohol abuse complicate TB treatment and pose a challenge to case management. Directly observed therapy can help to improve treatment adherence among these individuals.
- Cultural sensitivity is an important aspect of TB case management given the high TB incidence rates among foreign-born individuals from Asia, Western Pacific and Eastern Europe.

Methods

All TB case information including demographics was extracted from the Reportable Disease Information System (RDIS), a Ministry of Health computer database.

According to RDIS, TB cases are categorized as:

- "new active" when there is no documented evidence or history of previously active TB;
- "reactivated" when there is documented evidence of history of previously active TB which became inactive, and
- "inactive" when cultures for Mycobacterium tuberculosis have been negative for at least six months or in the absence of culture, chest or other x-rays have been stable for a period of six months.
- Respiratory Tuberculosis includes: pulmonary, primary pulmonary and pleural TB.
- Non-respiratory TB refers to: non-pulmonary or extrapulmonary TB.

The TB cases in this ***Infowatch*** include all clinically or bacteriologically confirmed cases of "new active" and "reactivated" TB, either respiratory or non-respiratory, found in Hamilton-Wentworth from 1993 to 1997. TB incidence rates were calculated using population estimates from the Ontario Ministry of Health, 1993 to 1996 Population Estimate Database [HELPS]. The 1997 rate was calculated using the Ontario Ministry of Health, 1997 Population Projection Database [HELPS].

Now Let's Hear From You

Your comments and suggestions are important to us. Let us know what you think about this issue. The contact person for this ***Infowatch*** is Ornella Tolomeo, Public Health Nurse. She can be reached at:

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